ENTREPRENEURS AND ENTREPRENEURSHIP: A STUDY OF ORGANISATIONAL FOUNDING

Michael G. Scott

Ph.D.

University of Edinburgh

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CONTENTS

SUMMARY

An examination of the literature on entrepreneurs shows several discrete strands of interest with no attempt at providing an overall framework for the analysis of the concept of entrepreneurship. However, certain themes do recurr, notably innovation (which is incorporated in a theory of economic growth by Schumpeter, and which more recently is the basis for an examination of technology transfer within industrial complexes); the idea of the "marginal man"; and the suggestion that perhaps entrepreneurship is a generalized social role, not simply in the economic sphere, but in other areas of activity (the "fixer", the tolkatch, the religious, political or ceremonial leader). Consideration is therefore given to Weber's discussion of charisma which it is suggested may provide a framework within which the innovating economic entrepreneur can be placed. Previous studies of founders of new enterprises are reviewed and their findings provide a basis for a study of 37 new independent Scottish firms founded in 1969: information on 60 entrepreneurs has been obtained by in-depth interviews and questionnaires. (Detailed comparative information on almost 1000 other firms registered in the same year is also given.) The survey data are used to provide a picture of the Scottish entrepreneur and his firm - his family, educational and career background, the reasons for founding, the difficulties he has faced and his early progress. (The firms are small, employing under 100 persons, self-contained and self-financed with almost no outside help.) A more detailed analysis based on the interviews shows the relative unimportance of innovation and technology transfer, compared with the stress laid on independence, which is in fact an expression of anti-bureaucracy, a rejection of the large organisation. A significant proportion of the entrepreneurs are mid-career men, blocked in promotion, or refusing to leave Scotland on promotion. It is suggested that the demand for autonomy which their 'independence' represents is part of a wider societal trend (one middle class solution to the problems for which so called "industrial democracy" is a working class solution). The frequent reference to ideals of quality (of product, of trust and business relations, of life style) is examined in the context of "anti-bureaucracy". The option of independence as a strategy in career planning is examined, its role both in technology transfer and in extending and widening the distribution of economic decision makers, and the relative hostility of the economic environment are stressed.

I certify a) that this thesis has been composed by me, and

b) that the work is my own.

Signed .....

INTRODUCTION

Put very simply, current conventional wisdom on the entrepreneur goes something as follows. The prime movers of our early industrial revolution were those pioneering individual businessmen who, by dint of hard work, perseverence, self-help and enterprise, established great commercial and manufacturing organisations - such men as Wedgwood, Boulton, Brindley, the Darbys, or later, on the international scale, Carnegie, Ford, the Krupps and so on. But the golden age of the individual entrepreneur ended with the 19th century, because of the development of giant corporations, the separation of ownership and control in industry, and the replacement of the entrepreneur by collective "management".

There is much in this conventional view that can be challenged in the following chapter. But the picture of the entrepreneur can be given much greater depth and substance, and this work is therefore aimed at pursuing the theme that entrepreneurship, far from being dead, is in fact a key mechanism in the process of social change in general, and technological change in particular; or, put another way, that entrepreneurship - once its ideological content has been stripped away - is intimately concerned with creativity, its applications, and its social and technological consequences.

Previous study of entrepreneurship as Chapter I will show has been multi-stranded. The word "entrepreneur" has been in use since the 16th century and passed into economic writings as referring to someone who united the various factors of production, who bore the risk, and who took the profits. Interestingly, there is no economic <u>theory</u> of entrepreneurship, because economics deals with aggregates

of businessmen, and its conceptual schemes are in terms of abstractions rather than concrete individuals. In fact the conventional view of the demise of the entrepreneur fits well into the economists scheme. Only Schumpeter has made any serious attempt to incorporate entrepreneurs into theory by relating economic growth to periods of activity by innovating businessmen. For Schumpeter, innovation is the crucial factor of entrepreneurship: he speaks of the "creative response" whereby certain individuals react to situations in such a way as to break the circle of routine behaviour and who set off a completely new train of events. The innovatory aspects are also stressed in social anthropological studies of entrepreneurship in other cultures which suggest that entrepreneurial activity, far from being solely a feature of western industrialisation, may in fact be a generalised social role, which, whilst varying in detail according to the particular cultural environment, is a universal mechanism for the transfer and application of new ideas.

The emphasis in the previous two sentences on the one hand of an "heroic individual" view and on the other hand of a "sociological" view of entrepreneurship seems to me to mirror a debate in the sociology of science on the role of individuals in the process of innovation: one aspect of this debate concerns what has become known as technology transfer and Chapter I contains reference to studies in this area which make use of the entrepreneurial concept. (It further raises issues which I believe were tackled in a fundamental way by Max Weber in his discussion of the nature of charisma, to which I have also referred).

Because the study of entrepreneurship has been multi-stranded, it would have been possible to pursue several lines of enquiry

into the topic. Financial and time constraints have, however, forced me to concentrate on only one small aspect of the problem: on the assumption that entrepreneurship is exhibited by the founders of new enterprises (and assuming also that new industrial firms exhibit some characteristics typical of all new enterprises), I have set out to describe, understand and hopefully explain the process by which new industrial firms come to be established, by giving a picture of the individuals concerned, and by examining the social milieu, the set of contingencies within which they have to operate. Chapter II provides the background to such a study of organisational founding. In part, the current work here reported is a replication of studies done elsewhere on the founders of new firms, studies which have largely concentrated on personal characteristics, such as family background and educational status, i.e. to answer the question "what kinds of people set up new firms?" So far as I can tell, no such study has been done in Britain - the nearest being studies of business managers and their backgrounds. My aim has been to look at new firms founded in Scotland during the calendar year 1969 and by interviewing their founders obtain not only such background information, but also to discover (a) the source of any new ideas or techniques, (b) the nature and the problems of the business environment, and (c) the motivations and rewards involved.

Three broad themes underlie the research:

(a) creativity and its application in a social context,

(b) social change through the mechanism of agents, not agencies,

(c) the anti-bureaucratic nature of entrepreneurship.

The main empirical work is described at length in Section II, whilst Section III is an attempt to draw conclusions on the nature of entrepreneurship from both the empirical work, and the previous studies reported in Section I.

Section I

The Background

CHAPTER I

1. The history of the term "entrepreneur" in economics[1]

The word entrepreneur appears at least as early as the 16th century in the French language, referring to men who led military expeditions: later usage extended to "adventurers" and government contractors. Richard Cantillon's essay on commerce (1775) saw the essence of the function as the bearing of uncertainty: the entrepreneur was the agent who buys the means of production at certain prices in order to combine them into a product that he is going to sell at prices that are uncertain at the moment at which he commits himself to costs. The classic definition which was to survive until the 20th century was that of Jean Baptiste Say, in the "Catechism of Political Economy" (1816): the entrepreneur is the agent who "unites all the means of production and who finds in the value of the products.....the re-establishment of the entire capital he employs, and the value of the wages, the interest, and the rent which he pays, as well as the profits belonging to himself." An earlier work of Say, (1803) suggested the need for "Judgement, perseverence, and a knowledge of the World as well as of business. He must possess the art of superintendence and administration." But Say was unable to include "entrepreneurship" as a factor in his general economic theory.

Contemporaneous with these French usages, English theorists made vague use of three terms - the "adventurer" (e.g. the Merchant Adventurers of the 16th century), the "undertaker" (of government contracts), and the "projector". As economic theory became formulated in the West, no operative place was found for the

<u>entrepreneur</u>, and especially is this so in English theory from Adam Smith to Marshall. Firstly, "the difficulty was that English theory was based upon a normal state of equilibrium, established by the multiple reactions of businessmen, consumers, investors and workers to the prices of goods and services. Individual variations in behaviour were seen either as cancelled out in the aggregate, or suppressed by competition. In this highly aggregative system, any unknown element was to be derived from the relations of theoretically measurable quantities. Such a system could obviously not utilise unmeasurable social or cultural factors such as entrepreneurship. To say that the entrepreneur was rewarded for risk taking, that is for uncertainty, was the negation of a proper theoretical explanation."[2] Secondly, the character of mid-19th century business obscured the entrepreneurial function, since the men performing it were also capitalist owners[3] - their rewards could be seen as returns to capital rather than as compensation for entrepreneurial ability, and in fact a recurrent problem was to distinguish between such returns for enterprise, and simple interest on capital. Marshall, for example, appears to have used "Capitalist" and "Undertaker" interchangeably.

American economists fared better, perhaps because of the earlier development there of big corporations. In the late 1870's Francis A. Walker emphasised the distinction between capitalists and entrepreneurs, and called the latter the engineers of industrial progress and the chief agents of production. Frederick B. Hawley (1882) saw risk taking as the distinguishing attribute. John Bates Clark apparently was the first to connect entre-

preneurial profits - considered as a surplus over interest (and rent) - with the successful introduction into the economic process of technological, commercial, or organisational improvements.

The study of entrepreneurship in the 20th century has been multi-stranded, as we shall see, but there is no doubt that a major initial influence was that of Schumpeter, who in a sense resurrected the entrepreneur, only then to try to rebury him. According to the "Theory of Economic Development" (1912), both interest and profit arise from progressive change, and would not exist in a static society. Change in turn is the work of innovating businessmen, or entrepreneurs. Since one change is likely to stimulate others, there is a tendency for innovations to cluster and produce long upswings in profit and economic activity: this is the basis for Schumpeter's theory of economic growth. For him, <u>innovation</u> was the criterion of entrepreneurship, (never risk-bearing), ".....the defining characteristic is simply the doing of new things or the doing of things that are already being done, in a new way." But, having identified the entrepreneur as the agent, the "bearer of the mechanism" of change, Schumpeter in later works particularly, attempted to reduce his significance to one of ineffective marginality, because economic growth and innovation tend to become depersonalised and institutionalised. There comes to be less reliance on the personal hunch, more on rational "figuring out", e.g. by institutionalised research bodies, and moreover the milieu created by increasing industrialisation may offer less resistance to change than was so even in the 19th century. Schumpeter

therefore believed that the entrepreneurial function had declined, notably at the hands of the big corporation, although he was aware of the possibility of an alternative future for the entrepreneur <u>within</u> the corporation.[4] Schumpeter's disciple, Galbraith, among others, has subsequently made a gallant attempt to finish the entrepreneur for good, but dead or not, he refuses to lie down. For the non-economist, recent economic theory presents a baffling array of differing usages, and definitions, of entrepreneurship. But the basic problem suggested earlier remains - how to incorporate the actions of concrete individuals operating in a social context, into a theoretical scheme based on simplifying assumptions and quantifiable variables.

Economic man operates under conditions of scarce means and unlimited ends and wants. He has perfect knowledge and seeks to maximise his utilities. The entrepreneur of theory therefore is based on an image of one who surveys the full range of technological and market possibilities of all courses of action and who chooses that alternative which promises him maximum long-term profits. By aggregating the actions of entrepreneurs and dealing with model behaviour, idiosyncratic actions are "controlled". By the use of "Ceteris paribus", non-economic elements are excluded. (There is therefore a strong emphasis on adaptive behaviour: the entrepreneurial function becomes in fact an administrative, decision making "managing director" function.) But this abstract model has poor predictive powers and seems to have come under attack within economics itself.[5] Moreover, it simply does not accord with reality . The

information and calculability necessary for the management of a firm to move to its equilibrium profit maximising price-output combination are clearly not available. Uncertainty and ignorance are omnipresent, yet this is the climate in which decisions have to be made.[6] Moreover, firms are not automata directed simply by market forces: they are governed by their day to day rules, set by the entrepreneurs and modified by the firm's bureaucracy. Furthermore, there is usually some element in the prices ruling at any time which can only be explained in the light of the history of the industry - a point impossible to incorporate in classical theory.

I would suggest two criticisms of the theoretical view of the entrepreneur. The first concerns the fact that economists aggregate the behaviour of entrepreneurs in order to "control" for idiosyncratic actions. As will become clear later, my own view of the entrepreneur is that he is very much concerned with innovation and change: this, I would suggest, is <u>not</u> to be understood by looking at modal behaviour. Change occurs at key points (rather than on a broad front), involving individuals whose behaviour is far from modal (and who for a time can make monopoly profits precisely because of this).

Secondly, and related to the aforegoing, is the whole "black box" approach. Such a model may be adequate where behaviour is purely adaptive, but because of the innovatory and uncertainty bearing aspects of entrepreneurship, the entrepreneur is concerned with what Schumpeter called a "creative" response: in other words, something happens in the black box whereby the output cannot be explained in terms of the relations between

inputs, nor is it predictable. What Schumpeter says is this: "What has not been adequately appreciated amongst theorists is the distinction between different kinds of reaction to changes in "condition". Wherever an economy or a sector of an economy adapts itself to a change in its data in the way that traditional theory describes, whenever, that is, an economy reacts to an increase in population by simply adding the new brains and hands to the working force in the existing employments, or an industry reacts to a protective duty by expansion within its existing practice, we may speak of the development as <u>adaptive response</u>. And whenever the economy or an industry or some firms in an industry do something else, something that is outside the range of existing practice, we may speak of <u>creative response</u>. Creative response has (these) essential characteristics. First, from the standpoint of the observer who is in full possession of all relevant facts, it can always be understood <u>ex post</u>: but it can practically never be understood <u>ex ante</u>: that is to say, it cannot be predicted by applying the ordinary rules of inference from the pre-existing facts.....secondly, creative response shapes the whole course of subsequent events and their long-run outcome. It is not true that both types of responses dominate only what the economist loves to call "transitions", leaving the ultimate outcome to be determined by the initial data. Creative response changes social and economic situations for good, or to put it differently, it creates situations from which there is no bridge to those situations that might have emerged in its absence. This is why creative response is an essential element in the historical process: no deterministic credo avails against this.....(A) study of

creative response in business becomes co-terminous with a study of entrepreneurship."[7] So, creative response has nothing to do with the juggling of inputs, it can only be understood by looking <u>inside</u>, the black box, because inside is the entrepreneur's own view of the world, his definition of his situation, and the <u>possibility of changing that definition</u>.

The place of the entrepreneur in economic theory then is problematic. However, in the real world of the corporation at least, the economists seem to have solved the problem by denying the entrepreneur's existence. The advent of the corporation, and of "Managerial capitalism" has enabled economists to be quite sure of the disappearance of the entrepreneur. Thus:- "In many sectors of economic activity the classical entrepreneur has virtually disappeared. His role was essentially active and unitary; once dismembered, no device of collective abstraction could put him together again. As a result (so a substantial body of writers have suggested), entrepreneurship in the modern corporation has been taken over by transcendent management, whose functions differ in kind from those of the traditional subordinate or "mere manager". These people it is argued, can wield considerable power without necessarily holding equity, sharing profits or carrying risks."[8] And again: "In the past, leadership in business organisations was identified with the entrepreneur - the individual who united ownership and control of capital with a capacity for organising the other factors of production, and in most contexts, with a further capacity for innovation. With the rise of the modern corporation, the emergence of the organisation required by modern technology and planning, and the divorce of the owner of the

capital from control of the enterprise, the entrepreneur no longer exists as an individual person in the mature industrial enterprise. Everyday discourse, except in the economic text-books (sic), recognizes this change. It replaces the entre-preneur, as the directing force of the enterprise, with management."[9]

But is the entrepreneur really dead? For one thing, Marris makes some remarks which have an oddly familiar ring: "The testing tasks of business life are those which are least routine: the development and marketing of new products and of new methods of production, the planning and execution of expansion, the creation of organization where none previously existed.....it is difficult to award the accolade of professional ability to a chief executive who competently maintains a constant output, with constant profits, constant product-mix, and constant methods of production in a constant market! In order to demonstrate ability he must develop new markets, increase his share of old ones, develop new methods of production, organize a merger, or at least do something."[10] If the entrepreneurial function really has been dispersed to "management" it has not been dispersed very far: here it is "Chief Executive", elsewhere "Top management", i.e. one or a few men.

Can we draw something of value from these varied approaches? There is one formulation of the nature of entrepreneurship which covers points made earlier, which seems useful, and to which I shall be returning later. This suggests that a minimum definition of entrepreneurship should include:-

1. The entrepreneur is responsible for the control and

direction of resources.

2. Control and direction do not imply day to day supervision (management in a narrow sense), but rather innovation and the adjustment of policy to external changes.
3. The bearing of risk or uncertainty arising from innovation or adjustment.
4. The reward for such risk bearing is profit-taking.[11]

The four elements are therefore co-ordination or control, innovation, risk-bearing and profit-taking.

Before leaving this section there is one quite different, but important, approach which must be mentioned. This involves looking at the whole internal corporate environment and suggests that this is a replica of the kind of world in which the early industrialists lived, and which they exploited - a closed world of resources, knowledge, law, finance, and contacts.[12] According to this view, the corporation may be able to provide just the environment which is conducive to innovating entrepreneurship and thereby solve what is a dilemma for the modern corporation, so that far from leading to the demise of the entrepreneur, the corporation, under conditions of rapid technological change, could prove to be his new domain.

The dilemma referred to goes as follows: the corporation above all seeks survival, through stable management; but it exists in a changing world; therefore it must assure its future by promoting innovations; but the innovating process involves taking decisions in continuing uncertainty, which continually disrupts the stable system of management. Burns suggests:- "The entrepreneurial role, and the entrepreneurial function, is as essential to the well-being and growth of the large corporation

as it was to the economic sector which provided, two or three generations ago, the environment for entrepreneurial opportunity .....the provision of a favourable context for entrepreneurial activity involves a remodelling of the conventional structure of the corporation.....the process of innovation is one which requires the exploitation of the resources of capital, labour, market knowledge, production technology and scientific expertise at the disposal of large corporations, in much the same terms as the classic entrepreneur exploited the resources of the segment of the economy with which he was acquainted.....the corporation must provide for this not by calling directly for it, or by "recruiting entrepreneurial types", but by providing the appropriate organisational context. This means designing an organization which would be "enterprise-centred" rather than "management-centred".[13] Such a call is of course consistent with Burn's earlier suggestion that industry is now entering a third phase of development - (the first being the early factory system, the second bureaucratization), - characterized by a new relationship with the market (where production has over-taken spontaneous demand), an influx of new technological developments, and a commitment to continued development and expansion.[14] Such a phase demands among other things a much greater degree of flexibility in internal organization, a movement toward organic structures. The position and role of the entrepreneur in such a system is clearly an important future question, although beyond the scope of the present work.

2. Economic history and the entrepreneur

I do not want to catalogue individual historical studies of entrepreneurs, because there is a large literature which is readily available. All I want to do is point to certain aspects of entrepreneurship which have been illuminated by historical study. But firstly, we should remember that studies of entrepreneurs have generally been undertaken by historians for one of two reasons. Either firstly, to help build an ideology of the moral character of capitalist enterprise, "Let us now praise famous businessmen", in the style of S. Smiles "Lives of the Great Engineers", etc., a sort of "great men" theory of enterprise. Or secondly, and more importantly, to throw light on the period in question. So one studied Arkwright, or Abram Darby, in order to gain insight into the social character of the Industrial Revolution, rather than to learn about entrepreneurship. The chief exception to this was the work of the Harvard Research Centre in Entrepreneurial History, in existence for 10 years after 1948, which did set out to understand the nature of enterprise, and which significantly failed to produce any single, unified body of theory, despite a great deal of empirical work.[15]

The economic historian, like the economist, uses the term "entrepreneur" freely, but has not produced a clear idea of what is involved. There is of course an important distinction between the two approaches: the historian is concerned with depicting the past, with irreversible, discontinuous change, whilst the economist is concerned with the construction of systems of thought, by isolating and abstracting. The former has no difficulty in identifying entrepreneurs, by being flexible in his definition:

the latter, as we have already seen, has been unable to incorporate them into his theories. One consequence has been that the historians' studies stand by themselves, and generalizations do not come easily. Nevertheless, three recurrent themes are discernable.[16]

Firstly, the need to show entrepreneurship in its <u>social context</u> - there is no point in looking for particular individuals who could be labelled entrepreneurs, unless at the same time studying the actual societies that moulded them and which they simultaneously helped to shape.[17] There is, in other words, a concern to show the general condition of society, the context within which inventors and businessmen work and thrive.[18] This would include, for example, studies such as that by Bendix which showed how the ideological content of this environment was moulded by the early industrial managers into a more amenable condition, how the traditional authority relationships were broken down.[19]

Secondly, there is the awareness that entrepreneurship is as much concerned with <u>associations</u> of individuals as with individuals themselves, and that it is the study of the relationship between the association and the society in which it functions which is important. Take, for example, Weber's study of Protestant Sects. Similarly, the case studies of the early industrial revolution show the multiplicity of connections between a few well placed men: as has already been suggested, their's was a small, closed, organised world of finance, law and knowledge.

Thirdly, there is an underlying theme that entrepreneurship is an aspect of <u>organization</u>, that what was developing in the 19th century, for example, was a new, more rational, and more specialized

form of organization, the making of "new combinations of ideas, of things, of forces and of other men."[20] One should perhaps mention here the work of Stinchcombe, who has emphasized that firms which survive become organizationally ossified, so that they become living museum pieces, representations of the vogue of organization which was current at the time of their founding, or rather representations of what was then possible. They are therefore able to tell us much of the conditions facing their founders, what their problems were, and how in the existing state of knowledge and with existing resources the founders solved those problems.[21]

I think the contribution of economic historians to the study of entrepreneurship has been an important one, not simply for the amount of empirical data produced, but because of the underlying emphasis on the importance of the entrepreneur's environment. This latter aspect is considered further in the next section.

3. Social anthropology and the entrepreneur

Anthropologists have become interested in entrepreneurs for two reasons: firstly, to learn about the function of enterprise in primitive and peasant economies, and secondly, because the entrepreneur is seen as a key agent in the process of cultural change.[22] This does of course raise the whole question of how far one can take economic concepts (including entrepreneurship) developed from the particular market situation of western capitalism, based on principles of maximization and the allocation of scarce means, and apply them to primitive societies, especially since "ends", "means", "scarcity", etc. are not universals but have large elements

of cultural determinism.[23] This is not to deny the universal need for "economizing" in its true sense; after all, men do have basic material needs which must be satisfied and it is doubtful if anywhere the gifts of nature are exactly congruent with the needs of men. Economic anthropology has tended to regard as economic only what may be called the technical aspects of production (what raw materials are available, what crops will grow, and so on), but then to show, as Malinowski did for example, how the production of goods and services was thoroughly embedded in political, religious, social and kinship institutions. There has been a reluctance to isolate the economic from the wider cultural sphere. There has therefore arisen the possibility of taking concepts developed for the narrow economic sphere and using them in a much wider context. This has happened to the idea of entrepreneurship, which whilst not exactly defined has up to now had the connotation of ownership or management of an industrial firm: what is important about the anthropologists' more recent approach is that they have been able to extract the crucial aspects of entrepreneurship - leadership, innovation, risk-bearing and profit taking - and apply them to situations unrelated to the ownership of industrial enterprises. This suggests firstly that entrepreneurship is in fact a generalized social role and secondly, that its exact nature depends on the environment within which it operates. I want to consider in more detail some of these studies. Firstly, the work of F. Barth.[24]

Barth wants to analyse the place of the entrepreneur in a wider social context of interaction, to relate two sets of phenomena - entrepreneurial activity, and general features of the social life

of the community. He rejects structural analysis, instead relying on a Games Theory approach which emphasizes the dynamic elements of the "chain" of transactions between the entrepreneur and his environment and the reciprocity of these transactions. "The view we adopt is that all social activity may be analysed as a result of constrained choices.....the relations of entrepreneurs with the remainder of the community in which they are active may be represented as a series of transactions between actors. The difference between actors pursuing entrepreneurial activity, and the incumbents of traditional statuses who act in accordance with institutionalized patterns, are thereby limited to a few crucial features, and are largely a question of emphasis and degree: these features are:-

1. The entrepreneur has a more single minded concentration on the maximisation of one type of value: "profit" (which as we shall see is not quite what the economist calls profit).
2. The entrepreneur acts on the basis of the deductive prognosis of results instead of expectations based on accumulated institutionalized experience.
3. The entrepreneur has a willingness to take risks by committing his assets, trusting his deductive reasoning and acting against the odds.

Furthermore, he does all this in a specific social environment - what Barth calls a "niche", the position which he occupies in relation to resources, competitors and clients. (This is in fact a structural element, analogous to the use of "environment" by an ecologist or human geographer: "resources in the form of codfish

on a bank provide a niche for cod-fishermen, whilst their activity in delivering to a port again provides resources in unprocessed and untransmitted catch, which may be exploited by actors in a niche as fish buyers"). This concept brings out "those particular features of an environment to which any specific enterprise must be adapted, the tasks it implies, and the prospective limitations on its growth.....The choice of niche is in a sense an initial choice which precedes the launching of the enterprise, though it may be modified and changed in the course of the enterprise."

It is possible to draw up for the entrepreneur a balance sheet of "profit" and "costs". Barth defines "profit" as net rewards in various forms - not simply monetary, but also power, rank, experience or skills. "Their classification together under one heading is justified by the fact of their transitivity: the latter forms of gain may be obtained from and converted to, a material and monetary form, and thus serve the entrepreneur as a store of value in a strictly economic sense." His costs likewise are inclusive of social costs - loss of power, rank, goodwill. "For each enterprise the entrepreneur must therefore estimate - and subsequently pay - costs in any one of the several forms of value that circulate within the community's network of social prestations and counter-prestations. This may prevent him from pursuing various instrumentally effective strategies, because he is aware, or discovers through the failure of the enterprise, that its social costs are too great." So some acts which would technically be effective are impossible because they call down legal or moral sanctions in the community. Similarly, persons may

have commitments in specific social relations which hamper them in, or prevent them from, pursuing effective strategies. (Hence the advantages of being an uncommitted outsider or isolate). Finally, the entrepreneur has assets - his sum total of capital, skills and social claims. Note that profits may be earned, and costs incurred, not merely in the monetary sense, but in any one of the several forms of value circulating in the community. This leads to the last element of Barthe's model the concept of "spheres of value", and channels of conversion between them.

In primitive economies it is possible to demonstrate the existence of discrete spheres "within which goods and services circulate freely, but where the goods and services of one sphere can only be transformed into those of another sphere through a few restricted channels." The studies in Barth's book show that this is also the case in western communities. Barth's own words sum up the situation: "With transactions which include prestations not only of economic but also of non-economic types, and with the inter-relations between the two, we are faced precisely with such sectors or spheres for the exchange of value, and channels of conversion of value from one sphere to another. To give a concrete illustration: several of the enterprises we have discussed require for their realization both private capital, and administrative clearance and public capital, i.e. political decisions of a certain form. Value in the form of money cannot be directly exchanged for value - goods and services - in the political sector: these constitute discrete spheres, and administrative decisions cannot be bought legally for money. Yet there <u>are</u> legitimate channels through which money may be converted into such decisions: by investment in a party

apparatus, through elections and votes, the breakthrough from one particular sphere into another is performed. The man engaged in an enterprise will be concerned to move his store of value, his assets, through such channels to the places where they can have optimal exploitative effect in a niche. But he will also be concerned to use techniques which as far as possible avoid or reduce social cost - i.e. do not lead him to incur loss in other spheres of exchange in which he participates in the community. Finally, he will be concerned that his enterprise should produce value in a form - i.e. goods and services which pass in a sphere - which again gives optimal freedom of exchange and conversion into value in other spheres (i.e. "liquidity").....
The cumulative effects of growth are generated only where the products, or at least the profits, of an enterprise are of a form so that they can be re-invested as assets in the same enterprise. This is most readily achieved where assets and profits belong in the same sphere. It can also be achieved where profitable channels of conversion may be found which form a closed circle or (to emphasize the growth factor) a spiral.....The image of boundaries which the term sphere calls forth may be inappropriately absolute, and that of channels of conversion too restricted. What separates spheres are not absolute boundaries, but rather the threat of loss through excessive costs, both material and social. It is the loss one is made to bear, the sanctions that one calls down upon oneself, that block certain types of transactions and thereby create boundaries between spheres.....Much social activity may be represented as the movement by persons of their assets along such channels (where costs are minimal) with a view to making them grow.

The essence of entrepreneurial activity is to discover new possible channels and exploit them: to enter such a system in which value flows and expand it, short-circuit it, or otherwise make it flow differently, while tapping or otherwise accumulating some of the flow in the form of profit."

Secondly, I would like to mention the work of C.S. Belshaw,[25] who is particularly interested in the encapsulating cultural environment which shapes entrepreneurship, and which in some cases may actively prevent the emergence of entrepreneurs. There are likely to be different kinds of entrepreneur according to the relative influence of a whole series of factors. For instance, one of those is the degree to which potential entrepreneurs are permeable to new ideas, i.e. the extent to which they are tied to the home troup and its traditional values. A common contempory occurrence is the migration of certain workers to industrial or urban areas (especially in the African case), and the possibility of returning to the home village with a whole new set of perceptions. Such an experience may also confer a degree of marginality on the individual concerned and free him from restraining obligations to his community; in Barth's terms, reducing the costs or increasing the possibilities of certain instrumental actions previously barred to him. Whether such a situation arises depends on the strength of traditional values. (As a slight digression - the nature of the influence of the home group has been discussed also by A.O. Hirschmann, who points out the obstacles to economic development posed by what he calls the "Group-focussed" and the "Ego-focussed" images of change.[26] The former applies to co-operative, cohesive societies, where an individual perceives his own improvement as being possible

only at the expense of others, and where exceptional performance is penalized by such social sanctions as witch-craft accusations. The arrival of externally induced economic change is perceived to apply equally to all members of the community, the collective spirit remaining unchanged and opposed to the fact that economic development usually requires the existence of priorities in some sectors and activities.

The ego-focussed image applies to societies which are not closely integrated, where an individual who is faced with economic change will see it as a change to improve his own lot, and will not relate his new experience to his group. Unfortunately, this is likely to lead to the perception of enterprise as the result of luck, or scheming (consider the Latin American experience), and will devalue the great entrepreneurial virtue of engineering co-operation. Neither image, says Herschmann, is conducive to the rise of indigenous entrepreneurs, nor presumably will either help the returning migrant to put his new perceptions into practice.)

Belshaw secondly points out that the current state of the economy is important. Clearly, if it is so poor that the probability of success is perceived to be negligible, economic entrepreneurs are unlikely to be found. The existence of dominant western enterprises will also reduce the chance of success for indigenous entrepreneurs. In such cases, the role of entrepreneur can become institutionalised as belonging to aliens; something no self-respecting native would do.

Thirdly, Belshaw points to the possibility of becoming a leader in a non-business activity. Leadership roles in various spheres - business, kinship, ceremonial and religious - are

competitive but not necessarily mutually exclusive. Belshaw quotes one Melanesian group who were dependent on wage-earning, which provided them with security. Their independent initiative went into devising complex ceremonial: they were technically competent to become economic entrepreneurs, but preferred the security of wage labour, and turned to ceremonial for their outlets in inventiveness. Therefore the leaders of the group became ceremonial entrepreneurs instead of business ones.

Even where entrepreneurship <u>is</u> in the business field, we should not assume that the traditional western pattern will be followed. The internal organization of business firms differs considerably - Belshaw for instance quotes a study of Japanese firms:- "The internal organization itself of the great business house is infused with a spirit peculiar to Japan: for it shows marked traces of both the Japanese family system, with its widely ramifying claims and loyalties, and also the emotional dispositions associated with the Lords and their retainers under the old regime."

Finally, there is the problem of assessing the success of an enterprise. It is not possible to apply criteria of success employed by western economists - profit, capital expansion - since the objectives of entrepreneurship are culturally determined and may be different from those assumed by an outsider. This point is well made in an article by J.M. Van de Kroef, which provides examples to show for instance the <u>social</u> nature of wants, and also of what is regarded as "improper" use of capital, credit and investment by western standards, which is not improper when seen in its cultural context.[27] One paragraph will serve as an

example of what De Kroef is saying: "The Indonesian entrepreneur works to live, unlike his ulcer-ridden counterpart in the West who often seems to live in order to work. The Indonesian's economic activities are, therefore, much more subordinated to certain desirable standards of welfare, such as leisure, abundance of food, feasts, ownership of prestige-bringing objects and so on. Once a certain measure of these things has been reached intensive economic activity for its own sake or for the sake of increasing the profits further still becomes of secondary importance.....his improper use of capital stems from similar cultural impediments.

Liquid capital was traditionally unknown to the Indonesian villager, and hence he has only very recently learned how to employ it more or less efficiently. Secondly, money probably made its entry into the village society in the form of a debt, a cumber-some requirement which had to be met from time to time, instead of being viewed as a useful and, desirable for its own sake. The Indonesian entrepreneur still stands with one foot in this traditional environment. He generally understands the value of silver coins, but paper money.....often seems to him undesirable. Again, his interest is not in capital, nor in the steady accumulation of it, but in the prestige and in the leisure which it periodically can bring to him. This too explains his tendency to invest his capital not in his business or in some other form of enterprise, but in real estate and in gold and silver objects. He consumes "conspicuously" in Veblenian sense, by his leisure or by his purchase of houses, broaches, ear-rings, land, etc. because these represent a standard of welfare traditionally sanctioned.

More liquid capital, stocks and bonds, even a flourishing business is of little use to him, so long as he does not reach his idea of general welfare with them."

If I can quickly summarize what has been said so far:-

1. The idea of "entrepreneur" originated in economic thought, but has neither been incorporated into theory, nor adequately defined. In fact, there have been attempts to write him off.
2. Historical studies of entrepreneurs have emphasized the importance of the social and organizational context in which they operate.
3. Anthropologists have taken the narrow economic concept, applied it across cultures, and given suggestive indications that we are in fact dealing with a generalized social role, whose precise nature is dependent on type of environment, and
4. Implicit in all this is the idea that the entrepreneur is involved essentially in innovation and social change.

4. The entrepreneur and technology transfer

I now come to what has been the most recent usage of the term, namely the role of the entrepreneur in the transfer of technology. At first sight this would seem to be a totally different usage from all the previous approaches, but I hope it will become clear that this empirical work supports several of the earlier suggestions. The underlying position is put by Burns:- "It is that the mechanism of technology transfer is one of agents, not agencies: of the movement of people among

establishments, rather than of the routing of information through communications systems."[28]

The main work in this field has been carried out at M.I.T. Sloan School Management,[29] since 1964, where a series of studies have looked at (1) the creation of new product ventures and new technology divisions in existing companies (internal entrepreneurship), and (2) the creation of new companies by entrepreneurs seeking to exploit technological advances (spin-off entrepreneurship). The results can be briefly summarized as follows.

In large companies (the "internal" entrepreneurs): firstly, new developments require a "champion"; this has been known and speculated about for some time, but relevant data to confirm it has only recently been obtained. Secondly, the men who headed new ventures, the champions of new ideas, the internal entrepreneurs, appear quite similar in their characteristics to the spin-off entrepreneurs who founded their own companies (which we will come to in a moment). Thirdly, it was emphasized that the policies and attitudes of organizations often worked to defeat entrepreneurial efforts, e.g. whilst entrepreneurship is characterized by youthful energies, in the companies studied a definite bias existed against younger men taking on venture responsibilities. Fourthly, possibly as a result of the previous fact, many would-be entrepreneurs leave the corporate organization to found their own firms. (One study showed that the total sales in 1966 of a group of entrepreneurial companies whose founders had come from one large Boston electronics company, were approximately double the sales volume of the parent company: the loss to that corporation

can be readily seen).

For the spin-off companies, the following facts emerge from a study of over 200 companies founded by ex-employees of M.I.T., Government and private laboratories (what is known as the Route 128 phenomenon). Firstly, they were highly successful; whilst in the U.S. generally, <u>most</u> new companies fail within a few years, the spin-off companies seldom fail, in fact they have a failure rate of only 20% over five years. Secondly, much more is now known about the characteristics of the spin-off entrepreneurs (and these are the data strikingly similar to those obtained for the internal entrepreneurs). Briefly:

(a) the home environment is consistently important in that 50% of the entrepreneurs have fathers who were themselves self-employed:

(b) they are well educated people, on average with master's degrees:

(c) they are young, average age at time of company foundation being the mid-30's:

(d) their laboratory work prior to founding had been in development rather than in pure research, i.e. they seem to have developed a consciousness for translating knowledge into physical embodiments, which they have carried out with them into the market:

(e) Success is directly related to the degree of technology transfer - the more advanced the technology, the greater the success.

(f) Success was related to educational achievement, but inversely, since Ph.D.'s fared worse than Masters, and

it is suggested that their general temperament, attitudes and orientations are not of line with those needed for successful technical entrepreneurship. Lastly, successful companies were those which concentrated more on both personnel and marketing strategies. This is a very potted account, and misses out the work done on the commercial environment, such as the availability of venture capital and so on.

Some general comments on the findings. Firstly, the fact that the corporation is largely inimical to enterprise, and drives out potential entrepreneurs, seems relevant for Burn's comments on the organizational dilemma and the need for new organizational structures under conditions of rapid technological change, i.e. ones that are enterprise rather than management centred.

Secondly, the youthfulness of the potential entreprenour is at odds with the organizational career structure, which envisages the granting of responsibilities at a much later age. Is this in fact an indication of the inherent inadequacy of any hierarchical career system under conditions of rapid change, when only the "lower" members have up-to-date knowledge, whereas the "upper" members have the political power: it is of course in the end only technological knowledge which will save the organization from obsolescence. Both these points support one of my central themes - the anti-bureaucratic nature of entrepreneurship.

Thirdly, I am not sure what to make of the importance of being the son of a self-employed parent, except that it reflects the general evidence for sons of professionals to enter their fathers' occupation.

Finally, what is not known is how far these data apply generally, or put another way, is the Route 128 phenomenon strictly related to the world of Boston finance, and government military and space research?

I want to finish this section by giving a resume of the Burns paper with which the section started.[30] The argument runs as follows:- there is a basic assumption behind current attempts to disseminate new ideas from research into commercial use that technical knowledge is a real or verified object which can be transferred from one individual or institution to other individuals or institutions. According to this view, it is the idea or piece of information which is in itself seminal. Technology is seen as an assemblage of pieces of information which can be "expelled from one sector of creativity and transposed to another to provide different outputs," and this is reflected in the development of means of recording, retrieving and transmitting ideas, technical routines and research information. Such a view, says Burns, derives from an image of society and of relationships between men, ideas and institutions, which belongs to the past; an image as old as industrialism itself, and which was part of a general view of society in which the individual was free to dispose of his labour as he pleased, and of his land, his votes, his inventive ideas, on the market. But even by the mid-19th century this picture was changing: in particular science became specialized and professionalized, and the dialogue between it and industry lapsed, as did the practice of trading scientific ideas on the commercial market. The boundary between the two is delineated, for example, by the specialized journals, (whose

predecessors, the general scientific journals, had brought science and industry together in the early part of the century). "It is the institutional framework essential for the development of science, technology and manufacturing industry which interposes immaterial but effective constraints on the transposition of ideas and methods between them in the manner which was possible in the past and assumed as feasible in so many of the policy formulations and administrative mechanisms designed to facilitate it now." The Route 128 phenomenon represents an instance of the rewards to be gained by breaking through the institutional confines which now surround academic research, engineering technology and manufacturing R. & D. (Think back to Barth's comments on spheres of value and the entrepreneurial role in engineering the flow of assets between spheres, in this case the flow of ideas and knowledge across institutional boundaries).

What we need, Burns suggests is a more up to date view of the world. "If it is agents rather than agencies which are the vectors then we are dealing with a world of scientific and technological activity which presents itself in another light than that of alienable, transferable, marketable ideas. Reality now is where the action is. Just as the sense of our ending personal identity seems to be dissolving into an apprehension of the specific identity which accords with each encounter and social occasion, with its own definitions and ad hoc rightness, so the application of acquired knowledge of the laws of nature, even the search for such laws, has become instead a posture of consensual alliance with others in the definition of "the problem". Scientific and technological progress alike become almost linguistic exercises -

the search for a terminology which will adequately represent or model and above all define (in the sense of setting boundaries to) the relevant complexity."

It is no longer sufficient to look for the simple juxtaposition of industrial and academic premises, with some kind of "Osmosis of ideas and information among them." What seems to be critical is the existence of "Complexes of research institutions, R. & D. laboratories, and technically advanced manufacturing plants in Massachusetts, California and elsewhere, complexes which are large enough to support a self-sustaining flow of technically qualified people within them."

The value of consultancy in this respect may be being underestimated. "If the contemporary model of innovation is represented by a "package" form - by the passage of the technically qualified individual from a research front activity to a task which demands the same resort to disciplined search for solutions in related technical areas but in different institutionalized circumstances and with different objectives - then consultancy is a mode of activity in which the model of the process may be institutionalized and developed in autonomous and therefore increasingly articulate and effective forms. One of the mysteries of the development of industrialism is the supercession of the practice of consultancy through which technological advances were fed into the electrical and mechanical engineering industry during the last quarter of the 19th century, and the first quarter of this, by industrial R. & D. Industry, by swallowing the consultancy function, may have done itself a disservice." What is possible is that the spin off entrepreneur is replacing institutionalised

consultancy, and moreover may best fit the contemporary mode of technology transfer.

5. The essential elements

What I have so far tried to give is a "State of the Art" report on the study of entrepreneurship. The problem now is to see what can be drawn from the various studies. The most obvious common theme of the disparate approaches is that of social change through the medium of agents, rather than agencies. Essentially the study of entreprencurship "puts back the individual", and in so doing emphasizes the world producing nature of man as he is engaged in social action. Reality is socially constructed: changes in that reality stem from changes in men's knowledge, their perceptions of the world, their values, as given existence through social action. Innovation is as much man-made as is his world: no institution yet had a new idea.

The classical definition of the entrepreneurial function involved these elements:-

(a) Co-ordination

(b) Innovation

(c) Risk-bearing

(d) Profit-taking

Whilst the latter two may be important in certain circumstances (and especially in economic entrepreneurship), it is the first two elements which appear crucial and univorcal. Innovation and co-ordination simply imply new perceptions, knowledge, and action involving others to give existence to this knowledge. But the exact nature of innovation and co-ordination depends on the social

context: so the style of entrepreneurship varies according to the encapsulating social environment. There are, as we have seen, suggestive indications that entrepreneurship is a generalized social role, a characteristic of any organization where change is possible, even as Belshaw suggests in the esoteric field of ceremonial.

Entrepreneurship then, I suggest, has two essential elements. Firstly "creative response", the potential for innovation. Secondly, action involving others to give existence to this creative response. The former involves the individual's stock of knowledge, his perceptions of the world, the possibility of recombining the elements of his knowledge, and his resulting new perceptions. The latter involves the way in which social action translates ideas and facilitates their transmission: with their championing, so that they may come to have existence not merely as real or reified objects, as pieces of information, but as the source materials of change in natural or social reality as this is recreated in the ongoing process of interaction.

6. Charisma and Entrepreneurship

It seems to me that the essential elements which can be distilled from an examination of previous work on entrepreneurship bear a close resemblance to the fundamental nature of charisma as it is set out by Max Weber. Although the present work is concerned with the examination at a micro-level of one aspect of entrepreneurship (organisational founding), it is nonetheless important, I feel, to try to place entrepreneurship into a wider social and historical context, (i.e. this section may be

seen as a cadenza at the end of the first theme).

It should be made clear at the outset that it is my view that Max Weber's writing on charisma is essentially concerned with the role of individual ideas in the historical process, in other words, the way in which human creativity acting in a social context, alters that context. It is very much concerned with freedom, in the sense of non-determined action: with the <u>creative response</u> in fact, and here is the link with entrepreneurship, which as I suggested in the previous section is concerned with the application and transmission of new ideas, with the way the creative individual, by using social resources, can alter the historical (and in the contemporary case the technological) process.

There is an extensive critical literature[31] on charisma which it is not necessary to re-iterate at length here. Two preliminary points should be made, however. Firstly, the literature tends to concentrate on charisma only in so far as it is part of Weber's typology of authority relationships: it is much less concerned with what I hope to show is the real significance of the charismatic for Weber, i.e. social change through the reformulation of ideas by free creative individuals. Secondly, there is much emphasis on the charismatic <u>leader</u> (especially amongst political scientists) without sufficient reference to the social context of that leadership. Worsley's work is salutary in this respect, emphasising as it does the catalytic nature of the leader:

> "A valid model for the analysis of charismatic authority has to be interactionist: one in which followers with

possibly utopian or at least diffuse and unrealised aspirations cleave to an appropriate leader because he articulates and consolidates their aspirations. He then specifies and narrows these aspirations, converting them both into more concrete and visible goals towards whose achievement collective action can be oriented and organized, and into <u>beliefs</u> which can be validated by reference to experience."[32]

It is most important not to be misled, by reference to "free creative individuals", into disregarding the social context. As Worsley points out, Hyde Park Corner is full of men with "messages" but they are figures of entertainment rather than serious leaders, because the messages have no relevance to their hearers. A prophet without followers is a false prophet, who changes nothing. So the charismatic involves the creation of new ideas, certainly, but it also involves the mobilisation of social resources if it is to have any lasting influence. (Again the link with entrepreneurship is clear. The entrepreneur, I suggested in an earlier section, is someone who has a new idea and who mobilises social and material resources to give existence to that idea). The real test of the charismatic, and of the entrepreneurial, is not whether it throws up a great leader, but whether it has a continuing impact on the institutional structures.

I want now to turn to a more detailed look at Weber's consideration of charisma not simply as part of his typology of authority relationships, but in the light of his overall view of history and social change, and what he considered to be the possibilities of freedom and creativity in an increasingly hostile

social environment. Weber's view of history is firmly bound with his views on the methodology of the social sciences. In the first place he suggests that historical reality is characterised by endless variety, a continuous flux of events with no clear boundaries between each of them. No conceptual scheme can reproduce this diversity and fluidity: concepts impose boundaries and dividing lines in order to aid understanding. There must therefore always be a contrast between the diversity of history and the simple, unidimensional character of concepts, which serve simply as reference points in the analysis of evidence. Weber's work essentially consisted in developing conceptual tools, of providing these points of reference on which subsequent empirical work could be based. Secondly, Weber's methodology must be viewed against the background of the late 19th century controversy concerning the status of the social sciences, i.e. should they be assimilated with the natural sciences or be regarded as wholly autonomous. It was held by some that different sciences viewed reality from different angles, and that what differentiated them was the method they used: in particular, whether they used a generalizing or an individualizing method. Such methods are necessary simply because reality is infinite, and conceptualisation can only result from some selection made from this infinite variety. The generalizing method removes the random and unique aspects of reality and subsumes events under general categories or types in order to generalise about them. The individualising method on the other hand neglects generic aspects, and concentrates on the unique particular features of one event. Both equally depart from reality in order to facilitate

conceptualisation, without which scientific knowledge is impossible. The idea that natural science uses the generalising method, and that the cultural and historical sciences use the individualising method was strongly opposed by Weber, on the grounds that in fact both methods are used by all sciences, and that the criterion of use of any method is <u>efficiency</u> and not some abstract ideological judgement that only one type is to be used by any particular science. In the case of sociology, certain aspects of its methodology are quite unlike those of the natural sciences. For example, since values give social life its meaning, it is not enough to show that two social conditions occur together or that one produces the other. It is also necessary to interpret the situations in terms of existing values: this is the basis of Weber's use of "verstehen", the basis of his interpretive sociology. On the other hand, sociology is a generalizing science, in that although every historical event is unique, the sociologist ignores the unique aspects and attempts to form types from which general laws and relationships can be discovered.

A basic problem which Weber faced, following from this, is how to be scientifically precise, in the way that the generalising method permits, about a unique historical event. In the case of one piece of reality, if we try to generalise, to draw analogies with other parts of reality, then we are making the particular phenomenon subordinate to generic laws, and destroying what is unique and distinctive about the event. And anyway, is it possible to formulate individualising concepts, since concepts are by their very nature regarded as general? Weber's answer to these problems

is well-known, the use of the Ideal Type, i.e. the construction of certain elements of reality into a logically precise conception. So, as Gerth and Mills point out:

> "His concern with specific historical problems and his interest in a comparative sociology of a generalising nature are thus related: the difference between them is one of emphasis. By the use of battery of ideal types, he builds up a conception of a particular historical case. In his comparative studies, he uses the same ideal type of conceptions, but he uses history as a storehouse of examples for these concepts."[33]

The whole point of this apparent digression is to emphasise that charisma is one of Weber's ideal types, i.e. a methodological technique rather than a historical entity. Indeed, ideal types are "unhistorical". As I indicated earlier, Weber says his scheme "does not seek to impose a distorting schematization on the endless variety of history, but only to provide <u>serviceable points</u> of reference for specific purposes."[34] To suggest therefore, as some writers have done, that Weber has a unilinear view of history is to miss the point of his analysis. He was totally opposed to philosophies of history, largely because he saw such theories not as scientific, but as value judgements. Mommsen sums this up neatly, and incidentally indicates the future direction of this chapter.

> "To Max Weber it was self evident that with the universal advent of rational scientific methods, any interpretation of world history with pretentions to universal applicability, whether religious, scientific or philosophico-speculative,

had become impossible. He says somewhere near the end of his (Sociology of Religion): "Wherever rational empirical knowledge successfully manages to demystify the world and to transform it into a causal mechanism, it eventually comes up against the claims of the ethical postulate: that the world is a divinely ordered and therefore somehow meaningfully oriented cosmos. For the empirical and mathematically oriented view of the world involves in principle the rejection of any view that finds "meaning" of any kind in the phenomena of the unseen world." From this basic position, Weber strongly opposed all historico-philosophical constructions. This applied in particular to the positivist ideology (of Comte and Bentham). Max Weber mercilessly exposes its pseudo-religious character: "the idea of progress first makes its necessity felt when the need arises for imparting to the destiny of man, when stripped of religious content, an earthly, yet objective meaning." Weber doubted whether scientific and technological progress would endure. Above all, however, he thought it weakness to seek a kind of inner support in the objective facts of technical progress, and thus build up an easy assurance regarding the meaning of the world, without thereby incurring the risk of faith.....Weber protested against what he considered unscientific historical theories, not only as an empirical social scientist, but also as the heir of German idealism..... he declared that the strict separation of value judgements from empirical research was the first condition of

scientific integrity. Ontological culture theories, which looked upon supra-individual factors as the only motive forces in the historical process - whether the development of the spirit of the age towards consciousness of freedom, the dialectic of economic production conditions, the emanations of a "national spirit"..... the biologically evolving structure of a nation, or whatever - were incompatible with the concept of personality, which was the keystone of Max Weber's thinking. To his mind "meaning", and "the attachment of meaning to the phenomenal world" were always matters to be decided by the individual, his option "for the daemon.....who holds the threads of life." In no circumstances could science, still less any theory of the philosophy of history, ever take the place of such personal decisions.....In the course of criticising the philosophy of history current in his time, Max Weber's own intellectual position was made clear. The individual overtops the empirical world by his capacity to take up an intellectual position with respect to it and to select from among several highest values. He can direct his action to the highest ideals and indicate new paths for historical development, by gaining disciples for these ideals and with their help influencing the social context."[35]

Leaving aside for a moment the underlying notions in the foregoing of individual freedom in the face of the empirical world - it does not seem consistent with Weber's expressed intentions to suggest, as Garth and Mills do, that he is in

fact propounding a straightforward "great man" theory of history, or a "pendulum" theory in which there is recurrent charisma which then gives way to routinisation. Even the most obvious of his themes - that of increasing rationality in the West - is noted as an unique historical fact and there is certainly no suggestion that some evolutionary force is at work, or that increasing rationality is necessarily synonymous with some notion of "progress".

If I can sum up what I have tried to show so far. Weber was opposed to any developmental theory of history. His use of non-historical ideal types stems from his view of the relationship between simplifying concepts and reality in all its complexity, and was an attempt to be scientifically precise when dealing with unique historical events. Because he saw charisma as a recurrent phenomenon in history, because he also emphasised its routinisation, and certainly because he points to increasing rationality in the West, some writers have attributed to him a linear view of history. But in the ideal types themselves there is no logical sequence of domination, and still less any fixed cycle between them.

What is common to all Weber's thinking, as was suggested in Mommsen's earlier quotation, is the importance of the individual in the historical process. More importantly, Weber is asserting the value of the individual personality in a world-historical setting that is basically antagonistic to it. (Hence his pessimistic view of the future). Rather belatedly, we come to what is the crux of the matter.

The individual personality, Weber suggests, needs rational

orientation in order to become "itself", to become "free". Mommsen again:

> "To Max Weber, intellectual honesty was the major constituent of personality: A rational pattern of life based on a responsible choice between various sets of values at any time offering themselves was its law of life. It is only by taking rational account of the motives and consequences of its own act that the personality is exalted above the instinctive "undifferentiated vegetative substratum of personal life" - (action versus act) - and acquires inner freedom."[36]

So rationality is the area of freedom. But, the increasing rationalisation and demystification of all life relationships threaten the very roots from which the personality derives its powers. Here is the paradox:

> "rational action in the service of ultimate purposes is the essence of personality. These ultimate purposes however are purely personal in origin: they belong to the transcendental spheres of the personality: the latter however stand in opposition to the rational operation of the concrete world. Hence arises a continual conflict between opposing principles. At the same time this contest is reflected in social reality - the contrast between "cultural man" and the "technician". The creative personality, whose attitude is directed by metaphysical values and which is therefore "free" of the conditions of the environment, is in continual conflict with the "technician" and the "organisation men", whose acts are

exclusively determined by existing conditions and the chance of success, and for whom the supreme law is adaptation and obedience to the powers that be. This basic dialectic is the historical-philosophical background against which the universal edifice of Max Weber's sociological theory of ideal types takes on its full significance. Two themes run like threads through the fabric: the relationship between adherence to religious "outer world" values and their "inner world" repercussions; and the relationship between creative mankind and technical mankind, or to put it succinctly, between charisma and bureaucracy."[37]

A similar viewpoint is expressed by Gerth and Mills (and indeed can be found in most writings on Weber). Gerth and Mills say:

"Weber "conceived of individual man as a composite of general characteristics derived from social institutions: the individual as an actor of social roles. However, this holds only for men in so far as they do not transcend the routines of everyday institutions. The concept of charisma serves to underline Weber's view that all men everywhere are not to be comprehended merely as social products. Just as for George H. Mead the "I" is ordinarily in tension with the social roles derived from the expectations of others, so for Weber the potentially charismatic quality of man stands in tension with the external demands of institutional life. For Mead, the tension between the "I" and the role demands is resolved in the creative response of the genius. For Weber, the response of the charismatic leader to distress unifies

external demands and internal urges. In a broad sense, one may say that externality is identified with constraint and charisma with freedom."[38]

It is now only a short step to a discussion of the locus of social change. It is important to stress that Weber did not identify macro-change solely with charisma, in fact he regarded rationalising bureaucracy equally as a revolutionary force. He pointed out that, once they had come about, social structures were apt to generate their own developmental tendencies. In the ordinary course of everyday life, change is endemic. The process of adaptation leads to changes in material interests for example. But, in order to break away completely from existing conditions and establish new lines of historical development, the power of objectively existing material interests is not enough. What is required are the repercussions of spiritual forces from the transcendental area of a normally religious charisma. The force of material interests is stressed certainly, but note what Weber says:

"Interests (material and ideal) and not ideas, directly govern the acts of men. Nonetheless, "views of life" created by ideas, have frequently as pointsmen, indicated the lines along which the dynamic power of interests propels action."[39]

The twin sources of change - interests and ideas - are frequently referred to in Weber. Elsewhere he says:

"Bureaucratic rationalisation, too, has often been a major revolutionary force.....but it revolutionises with technical means, in principle, as does every economic

reorganisation, "from without". It <u>first</u> changes the material and social orders, and <u>through</u> them the people, by changing the conditions of adaptation, and perhaps the opportunities for adaptation, through a rational determination of means and ends.....Charismatic belief revolutionises men "from within" and shapes material and social conditions according to its revolutionary will."[40]

Weber's study of the relationship between protestantism and capitalism shows that even in the case of economic entrepreneurship, real change and innovation are greatly dependant not only on the objective "external" forces of the market or of production, but on a charismatic reformulation of the <u>meaning</u> of economic activities. It was of course his study of Puritanism which revealed to Weber the world-changing power of "other-worldly" or transcendental ideals. The concept of charisma as a source of spiritual impulses of great intensity was found suitable for describing the phenomenon much more comprehensively. The founding of charismatic followings is the true form in which the strong individual can bring his personal ideas to fruition in a social context: which tends to suggest that in the last resort all cultural development is traceable to some charismatic eruption.

The charismatic need not concern only the religious. Shils has suggested:

"The charismatic quality of an individual as perceived by others.....lies in what is thought to be his connection with.....some very central feature of man's existence and the cosmos in which he lives. The centrality, coupled with intensity, makes it extra-ordinary. The centrality is

constituted by its formative power in initiating, creating, governing, transforming, maintaining or destroying what is vital in man's life. That central power has often, in the course of man's existence, been conceived of as God, the ruling power or creator of the universe, or some divine or other transcendental power controlling or markedly influencing human life and the cosmos within which it exists.....Scientific discovery, ethical promulgation, artistic creativity, political and organisational authority .....and in fact all forms of genius, in the original sense of the word as permeation by the "spirit", are as much instances of the category of charismatic things as is religious prophecy."[41]

Elsewhere Shils has also suggested that there is some central core of values in society.

"Society has a centre.....membership in the society, in more than the ecological sense of being located in a bounded territory and of adapting to an environment affected or made up by other persons located in the same territory, is constituted by relationship to this central zone.....the centre, or central zone, is a phenomenon of the realm of values and beliefs. It is the centre of the order of symbols, of values and beliefs, which govern the society. It is the centre because it is ultimate and irreductible .....(it) partakes of the nature of the sacred."[42]

Obviously it is tempting to see a link here: both the charismatic and the Centre are concerned with the provision of some meaningful symbolic and institutional order. Eisenstadt takes these points

and incorporates them in his discussion of the role which charisma plays in institution building.

Part of his argument runs as follows. It is a mistaken view that a chasm exists between on the one hand the ordinary routine aspects of social organisation, and on the other hand the extra-ordinary nature of charisma. Certainly any analytical distinction should not be taken to imply a total dichotomy in concrete situations. If we concentrate on the charismatic group, rather than on the leader, i.e. on the social rather than the individual aspects of charisma, we can see that whilst in the early stages such a group may be unstructured, the exigencies of orderly social organisation and the need to assure continuity both of the group and of the leadership, necessitates the process of routinisation, by which the innovatory aspects are transferred from the unstructured group to orderly institutional reality. In this light, charismatic elements are inherent in all social relations and organisations, which leaves Eisenstadt the problem of defining the charismatic both in terms of its analytical distinctness from the ordinary, and at the same time its interweaving with the everyday in concrete situations.

It is Shils' work (quoted above) which he calls to his aid. Both the charismatic and the centre are concerned with the provision of "meaning". The search for meaning is not always something extra-ordinary, or only to be found in situations of revolutionary disruption: it goes on at least in part of stable societies. Rituals such as rites of passage contain such charismatic symbolism, which appeases temporary social disruption by reference to a "higher" order: one could add that political

legitimations likewise appeal to the "spirit" of the nation, or to economic "good", and so on. This however is only part of the nature of the interweaving of the charismatic and the ordinary. Eisenstadt suggests that ordinary activity is directed towards the achievement of discrete, instrumental goals, seemingly unconnected in any "grand design". Yet within these ordinary activities oriented to discrete, instrumental and usually adaptive goals, there remains some notion, however passive and attenuated, of the central values which contain some element of overall meaning. Social institutions have a double aspect, therefore - their organisational exigencies on the one hand, and their potentially close relation to the realm of meaning on the other.

> "New organisations and institutions are built up through the varied responses and interactions between people and groups, who, in order to implement their varied goals, undertake processes of exchange with other people or groups.....but the terms of exchange, that is, the criteria of what is regarded as valuable.....are at least partially derived from the charismatically charged goals and norms, from the broader and more fundamental conceptions of order. Hence, in the crystallisation of institutional frameworks a crucial part is played by those people who evince a special capacity to set up broad orientations, to propound new norms, and to articulate new goals."[43]

Institution building is more than simply the exchange of resources between groups who use them to implement their own discrete, instrumental goals: it requires charismatic, entrepreneurial

figures to create and crystallize broader symbolic orientations, to establish the organisational framework within which discrete, instrumental goals can be pursued, and to mobilize the necessary resources. Charisma and entrepreneurship both involve not simply the possession of extra-ordinary qualities, but also the ability to alter the symbolic and cognitive order and thereby reorganise the institutional framework. As we saw, Weber's analysis of the economic entrepreneur in relation to the rise of capitalism, was an attempt to show that real change was not so much dependent on the objective market and productive forces, but rather on the charismatic reformulation of the meaning of economic activities.

Eisenstadt fails to pursue this link between the charismatic and the entrepreneurial, simply adding that apart from McClelland's work we know little about such entrepreneurial individuals or the conditions under which they operate, but that here is a challenge for further research. Without reiterating what was in a previous section, I hope that parallels can be seen between what was said there about the nature of the entrepreneurial, and some of this section; in particular the comments on the creative versus the adaptive response, the emphasis on the individual, the non-determined historical process which arises from the actions of such "free" men, whose stimulation comes not from external forces but rather from within. To repeat Mommsen's words: "the founding of charismatic followings is the true form in which the strong individual can bring his personal ideas to fruition in a social context."

I went to some lengths earlier to show that Weber's ideal types cannot be arranged in temporal order, that it is wrong to

impute any cyclical or evolutionary view of history to his schema. It is however interesting, and hardly surprising, that writers <u>have</u> made such imputations, because there seems to be one very common underlying view of change amongst many theorists and commentators. Change, it is held, may accumulate imperceptibly as each individual, by living in it, alters his received tradition before passing it on: or it comes as the fruits of dramatic innovation in social and cultural organisation - new religions, new legal norms, new economic organisations. So we have a model which envisages periods of relative "stability", interspersed with periods of revolutionary "disruption" (sic).

Certainly Weber does show us on the one hand massive organisational and cultural frameworks, emerging out of the common endeavour of people, frameworks which adapt over time to changes in the environment; and on the other hand are the major shifts in direction following from individual, creative charisma. But these, as should now be clear, are analytical distinctions concerning the respective sources of change, and say nothing about the concrete historical process. Put another way, change which comes from adaptive response to an altering environment, to altering material interests, can be contrasted with change stemming from newly created individual values.

The equation, bureaucracy equals stability, charisma equals change is simply false; for one thing, Weber was quite clear that bureaucracy could equally be a revolutionary force (although this section of <u>Wirtschaft und Gesellschaft</u> was not translated until 1968 - which may be revealing). In any case, the whole model has value undertones of which Weber would have disapproved.

If I can digress a little. History is essentially a thought process, a mental re-enactment of the past, and so, in a sense, history is contemporary: there can be no history of "the past as it actually did happen." Collingwood said:

> "At the present day, we are constantly presented with a view of history as consisting of good and bad periods, the bad periods being divided into the primitive and the decadent, according as they come before or after the good ones. This distinction between periods of primitiveness, periods of greatness, and periods of decadence, is not, and never can be historically true. It tells us much about the historians who study the facts, but nothing about the facts they study."[44]

So historical studies of entrepreneurs are not telling us about entrepreneurship but rather about the model of entrepreneurship held by the historian.

Can I now attempt to bring these disparate strands together. Firstly, entrepreneurship and charisma are concerned with the same set of problems. Secondly, Weber's model of change has been misinterpreted because analytical distinctions have been confused with concrete historical processes. Thirdly, what I want to suggest is that the entrepreneurial model of change has also been mis-interpreted, and that instead of dealing with the social process whereby individual ideas have been transformed into reality, because of ideological involvement on the part of historians, entrepreneurship has become the means to a "great man" theory of economic and technical change. This stems as much as anything from the fact that entrepreneurship (like charisma)

is studied ex post facto, and that the entrepreneurial process is largely ignored. So what is really being looked at is successful entrepreneurship, successful charisma.

7. Summary

Certain key themes can be drawn from the foregoing which I would summarise as follows:-

(a) We are concerned with social change and the process of innovation.

(b) We are dealing with creative rather than adaptive innovation (as epitomised by Weber's distinction between charisma and bureaucracy).

(c) It is agents, not agencies which are the bearers of the mechanism of social change.

(d) The perceived social context within which such agents operate is crucially important. Bureaucratic contexts appear to be particularly inimical to creative, autonomous activity.

Additionally, it is possible to point to the following shortcomings of previous works:-

(a) No single, acceptable definition of entrepreneurship has emerged from the literature. (There does however seem to be a common sense, tacit definition).

(b) There is little contemporaneous empirical work (except by social anthropologists).

(c) Any empirical work is normally ex post facto and therefore concerns successful entrepreneurs rather than the process of entrepreneurship. There is inevitably a "success

story" approach with ideological overtones, and the description of the social context is the observers', rather than the perception of the actors themselves.

The problem of course is how to remedy these shortcomings in the context of the foregoing chapter: how to ground the theoretical discussion in research activity at the level of real individuals. No single study could hope to achieve this, and the limits of time and resources enforce on me a necessary narrowness of scope. I must restrict the empirical part of this work simply to an examination of the founding of new business enterprises (which is reported in the second section). However, I shall return in the final section to the issues raised here, in the light of the empirical findings.

REFERENCES

1. Encyclop. of Soc. Sciences (1968) V5 pp. 87-91
J.A. Schumpeter. Economic Theory and Entrepreneurial History in Change and the Entrepreneur. Harvard Univ. Research Centre in Entrep. History (1949)

2. Encyclop. op.cit. pp. 88-89.

3. See J.A. Schumpeter. Theory of Economic Development (1951 edn.) p.77

4. J.A. Schumpeter. Capitalism, Socialism and Democracy (4th edn.) p.134

5. See A.A. Alchian. Uncertainty, Evolution and Economic Theory. Jour. Polit. Econ. v.58. (1950). R. Hall and C.J. Hitch. Price Theory and Business Behaviour. Oxford Studies in Price Mechanism. (1951)

6. J. Margolis. The Analysis of the Firm: Rationalism, Conventionalism, and Behaviourism. Jour. of Business V3. (1958) p.189.

7. J.A. Schumpeter. The Creative Response in Economic History. Jour. of Econ. Hist. v.7 (1947).

8. R. Marris. The Economic Theory of Managerial Capitalism. (1966) p.1.

9. J.K. Galbraith. The New Industrial State. (1967) pp. 70-1.

10. R. Marris. op.cit. pp. 58-9.

11. L.M. Fraser. Economic Thought and Language. pp.317-29, espec. pp. 319-20.

12. T. Burns. An Enterprising Future? B.P. Shield. Sept. 1968 pp. 21-5.

13. Ibid. p.25.

14. T. Burns. Sociology of Industry in Welford (ed). Society, problems and methods of study. espec. pp. 186-92.

15. See H.G. Aitken. Entrepreneurial Research: the history of an intellectual innovation. in Aitken (ed). Explorations in Enterprise. (1965).
A.H. Cole, Business Enterprise in its Social Setting. (1959)

16. H.G. Aitken. The future of entrepreneurial research. Explor. in Entrep. Hist. 2nd Series. v.1 1963.

17. W. Miller. Men in Business. Introduction

18. See S.G. Checkland. The Rise of Industrial Society in England 1815-85 espec. bibliography.

19. R. Bendix. Work and Authority in Industry (1963).

20. Checkland. op.cit. p.3

21. A.L. Stinchcombe. Social Structure and Organisations in J.G. March Handbook of Organizations. (1965) pp. 142-93.

22. C.S. Belshaw. The Cultural Milieu of the Entrepreneur. Explor. in Entrep. Hist. v7. (1955).

23. See R. Firth (ed) Themes in Economic Anthropology A.S.A. Monograph 6 (1967) espec. papers by R. Frankenburg and Joy. Also see D.B. Fusfield Economic Theory misplaced: livelihood in primitive society, and T.K. Hopkins Sociology and the Substantive view of the Economy both in Polanyi et al. Trade and Market in the Early Empires (1957). Also Firth and Yamey Capital, Saving and Credit in Peasant Societies (1964).

24. F. Barth. The Role of the Entrepreneur in Social Change in N. Norway. Introduction. pp. 5-18

25. Belshaw op.cit.

26. A.O. Hirschman The Strategy of Economic Development (1958) pp. 11-24

27. J.M. Van de Kroef Entrepreneur and Middle Class in Indonesia. Econ. Devel. and Cult. Change. v2. 1953-4 pp. 297-325.

28. T. Burns. Models, Images and Myths, in W.H. Gruber and D.G. Marquis Factors in the Transfer of Technology (1969)

29. See E.B. Roberts Entrepreneurship and Technology in Gruber and Marquis op.cit. Also see D.G. Marquis 2nd Report Research Program on the Management of Science and Technology. (1967). Sloan School of Management working paper No. 344-67.

30. Models, Images and Myths op.cit.

31. See especially: R. Bendix. Max Weber An Intellectual Portrait H. Wolpe A critical analysis of some aspects of charisma Soc. Rev. v16 (1968) pp. 305-18. R. Fagan Charismatic Authority and the leadership of Fidel Castro Western Polit. Qtly. v18 (1965) pp. 275-84. W.H. Friedland For a Sociological concept of Charisma Social Forces. v43 1964-5 p.19 J. Freund The Sociology of Max Weber p.233

32. P. Worsley The Trumpet shall sound Introd. to 2nd Edition (1968) p.xiv.

33. H. Gerth and C.W. Mills From Max Weber: Essays in Sociological Theory p.60

34. Quoted in R. Bendix op.cit. p.14.

35. Mommsen. Max Weber's political sociology and his philosophy of history Int. Soc. Sci. Jour. v17 (1965) p.28 & p.25.

36. Ibid p.29.

37. Ibid p.30.

38. op.cit. p.73.

39. Mommsen op.cit. p.30.

40. Economy and Society v3 pp. 1116-7

41. Quoted in Eisenstadt S.N. Max Weber on Charisma and Institution Building (1968) p.xxv.

42. Ibid p.xxx

43. Ibid pp. xxxviii-ix

44. Collingwood The Idea of History (esp. Pt. V pp.282-334). p.327

CHAPTER II

Studies of the founding of new companies

The first action in narrowing the scope of my enquiry is to look at the picture already painted by previous researchers of the process of founding new enterprises. Chapter I has set some of the scene by summarising technology-transfer studies, and the purpose of this Chapter is to examine a wider range of new-company investigations. The aim is descriptive rather than analytical.

There is, as I have already indicated, no study of the process of founding as it has actually taken place,[1] nor is there any published attempt to summarise what findings have emerged from those piecemeal (and post facto) studies which have been made.[2] (A special case is that of the attempt in India by McClelland and Winter[3] to instil entrepreneurial talent into chosen individuals who were then sent out into the market to establish new enterprises, and who largely failed not because of the lack of so-called 'n-ach' (psychological need for achievement) but because of their inability to enter appropriate economic net works, or to find what Barth calls 'niches'. Reference to this particular experiment will be made in the concluding section as it has implications for the whole discussion of entrepreneurship).

My own search of the literature[4] has however produced 16 studies (see table 2.1 and Appendix 2) which ask at least one of the following questions:

(a) what economic problems face new companies?

(b) what is the role of technological innovation in the

founding process?

(c) what are the characteristics of the persons who found companies?

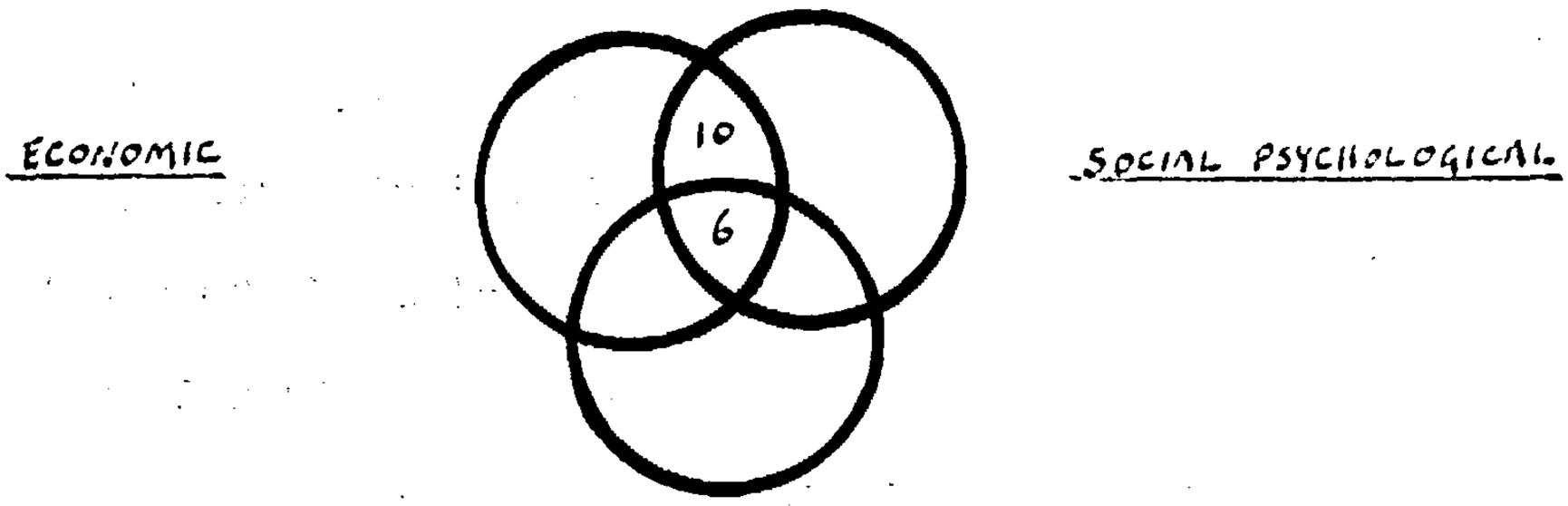
These 3 questions are in fact indicative of the basic reasons advanced for studying new companies, viz:

1. Economic reasons, which assume that the establishment of new companies is 'good' for economic development and should therefore be encouraged. Note how many studies use either implicitly or explicitly Schumpeter's definition of entrepreneurship. The studies in this category frequently seek to examine the economic environment in terms of, for example, taxation policy, with a view to making recommendations to governmental agencies to ease the founding process.[5]

1a Technological development. Part of the general economic reasons but concentrating solely on those new companies whose raison d'etro is technological innovation and which face specific problems, such as heavier capital formation.[6]

2. Social and Psychological reasons, which attempt to map out an entrepreneurial 'type' in terms of personality, career or family background, often with the aim of encouraging policies designed to increase the distribution of these qualities in the population.[7]

The studies are essentially descriptive, with the intention of also being prescriptive. No single study falls into one of the above categories alone, and the extent of overlap is indicated in the following Venn diagram.



The majority (12) of the studies were located in the United States, and a further 3 in developing countries. Only 1 study refers to the United Kingdom. This distribution probably reflects firstly the availability of research funds, but one can also speculate about the importance of cultural values associated with the 'American dream' and the pioneer spirit. Certainly the work of Chinoy,[8] for example, shows how such an entrepreneurial ideology (or mythology) has become part of the American world-view.

As one might expect, the methodologies employed in the studies is varied, with reliance on secondary data as well as the generation of primary data from questionnaires and interviews. Some employ psychological tests. They are all post facto studies. There is no consistency in sampling, other than the frequent use of some form of industrial indexes, and there is a wide spectrum of both manufacturing and service industry concerned. There is little cross-reference from one study to another.[9] In view of the varying contexts, it is difficult to generalise or make sensible comparisons: however, certain regularities in the findings do emerge, which can be summed-up as follows:-

(a) Age of founder. 7 of the studies, including most of the technology transfer cases, make special reference to the relative youth of the founders, i.e. a mean age of 40 years or less.

If we accept that there are many ways of externalising one's personality into the world through creative activity, and that one of these is the attempt at economic autonomy through company formation, we should expect such activity to take place later than activities (e.g. artistic or sporting) dependent on personal assets of intellect or physique which reach a peak under 30 years, since it also requires social assets built up over time, such as kin and friendship networks, and access to economic resources (which also helps to explain why family background - see below - is important). The role of dissatisfaction resulting from blocked career lines may also be relevant and will be discussed later.

(b) Father's occupation. Eight of the studies make special reference to the fact that the founder's father was himself a founder, was self-employed, or was a member of a profession. Several comments are in order here. Firstly, the importance of access to social and economic resources referred to above, is more readily available in middle class families. Secondly, the pattern of recruitment of sons into paternal occupations is a well known phenomenon. Thirdly, in most studies a minority of founders exhibit upward mobility from the working class (albeit usually from the skilled section), although this avenue of mobility is obviously a narrow one despite the mythology of the 'American dream'.

(c) Education. Nine of the studies point to the founders having higher than average educational attainment, and four of those (all

technology transfer studies) indicate exceptionally high qualifications. This fact is partly a reflection of the middle class origin of founders.[10] It may also relate to the way that higher expectation of life chances engondered by higher education, if not met, can lead to dissatisfaction with one's career, and the need to seek independence: this will be taken up in a later section.

(d) Previous founding. Four studies refer to a high incidence of previous or multiple foundings. This may simply mean that a successful founding gives access to resources for further ventures. The 'typical' entrepreneur founder which can be distilled from these studies, then, is relatively young, especially if he is a technical specialist, he is well educated, has possibly already founded one or more companies, and has a father who himself was a founder or is self-employed. With the exception of multiple foundings, I have to admit that this picture fits remarkably well the picture of the Scottish entrepreneur set out in Chapter 5.

Table 2.1 Summary of Empirical Studies in Company Formation

Study	(a) Locus of study	(b) Prime emphasis of work	(c) Sample population	(d) Data gathering technique
1. OXENFELDT (1943)	- (United States)	To investigate the social and economic ramifications of company forming	Studies from Dun & Bradstreet; Dept. of Commerce; some empirical work in retailing and specific manufacturing industries (e.g. shoes)	Literature search and data analysis
2. RUBENSTEIN (1958)	New England (United States	To investigate the problems of financing and managing new research-based enterprises in New England	75 technical entrepreneurs bankers, investors and manufacturers representatives	Literature search and personal interview
3. MAYER and GOLDSTEIN (1961)	Rhode Island (United States)	Factors affecting the survival and failure of firms in the first two years of operation	81 Service and retail firms founded or changed hands in Rhode Is. between Feb. and July 1958	In-depth interviews
4. SAYIGH (1962)	Lebanon	The role of the entrepreneur in economic development	207 "Business leaders" involved in economic establishments concerned with innovation. 62% in manufacturing industry.	Official and semi-official records Structured personal interviews
5. DANIELS (1963)	Texas and Georgia (United States)	To review the motives, attitudes towards business, and the backgrounds of people who form companies	521 Georgia and 1059 Texas firms of all kinds formed between 1949-58 and 1947-57 respectively	Structured interviews

Table 2.1 (continued)

Study	(a) Locus of study	(b) Prime emphasis of work	(c) Sample population	(d) Data gathering technique
6. SMITH and CARTER (1963)	Maryland and Washington D.C. Metropolitan area	The operations and performance of small research and development firms	73 small technical companies	Mail questionnaire and follow-up personal interviews
7. COLLINS, MOORE and UNWALLA (1964)	Michigan (United States)	The socio-psychological characteristics of entrepreneurs	110 Michigan small manufacturing firms with more than 20 employees, formed after 1945, over 5 years old	Unstructured, in-depth interviews
8. DELANO, JOHNSON and WOODSWORTH (1966)	Washington (United States)	Examination of the entrepreneurial function to see if policies could be developed to increase the rate and speed of new business formation	195 Yakima county and 207 King county firms founded between 1960-2 mostly in manufacturing	Structured, open ended interviews
9. ROBERTS and WAINER (1966)	Primarily Boston area (United States)	To determine the key factors that affect technical entrepreneurship, and the success or failure of new technical firms	107 University laboratory and 59 academic department spin-off firms: 9 spin-offs from a University laboratory spin-off: 15 spin-offs from an Air Force laboratory. All companies were not subsidiaries of a previously existing company, and were formed after 1945.	Interviews or questionnaire

Table 2.1 (continued)

Study	(a) Locus of study	(b) Prime emphasis of work	(c) Sample population	(d) Data gathering techniques
10. DRAHEIM, HOWELL and SHAPERO (1966)	Minneapolis - Saint Paul (United States)	The development of Research and Development complexes and technical company formation.	142 technical companies formed since 1895 in the population universe. (Sample size not given)	Interviews and historical data.
11. ALPANDER (1967)	Turkey	To portray the "big business establishments and the entrepreneur in Turkey" a culture inimical to the business function.	103 large firms owned by Turkish nationals	Structured interviews
12. INDUSTRIAL RESEARCH INC. (1967)	South eastern Pennsylvania (Philadelphia) (United States)	To investigate the motives and problems of science-based entrepreneurship	35 Science-based Companies	In-depth interviews
13. SMITH (1967)	Michigan (United States)	Looks at survival and success factors associated with types of founders, and the firms they form.	52 of the firms used in the Collins and Moore (1964) study	Unstructured, in-depth interviews
14. SUSBAUER (1969)	Austin, Texas (United States)	Facers involved in the technical company formation process	22 technical firms	Structured open-ended interviews
15. HARRIS and SOMERSET (1971)	Kenya	Investigation into factors encouraging or hindering "entrepreneurial talent" in a developing country	87 founders of businesses assisted by the Industrial and Commercial Development Corporation. (Comparison with 848 market trades in 10 regions of Kenya)	Structured interviews

Table 2.1 (continued)

Study	(a) Locus of study	(b) Prime emphasis of work	(c) Sample population	(d) Data gathering techniques
16. BOSWELL (1973)	Mainly East Midland (England)	Part of study on growth and development of small firms and the problems they face	Total sample 64 firms in engineering, hosiery and knitwear industries; data from 30 of these refer to founders.	Structured, open-ended personal interviews

Table 2.1 (continued)

	(e) Definition of entrepreneur	(f) Age at founding	(g) Educational level of founder	(h) Previous occupational history of founder	(i) Previous company forming experience of founder	(j) Father's principal occupation
1. OXENFELDT (1943)	Schumpeter	"Mature" Average age is increasing	-	-	"Large" proportion of 300 shoe manufacturers had owned at least one previous business	-
2. RUBENSTEIN (1958)	Schumpeter	-	-	Primarily technical experience in University laboratories, or academic departments, or in existing technical companies	-	-
3. MAYER and GOLDSTEIN (1961)	The owner, but not necessarily	Median 40 yrs (A)	Median 11.0 yrs (State median = 9.3 yrs)	Most were manual labourers (49) or white collar workers (22)	26 out of 81 had previously owned 1 or more businesses	-
4. SAYIGH (1926)	Schumpeter Includes innovation within extant firms	"Rather young" 25-35 yrs	57% completed high school: very much higher than national average where majority have elementary education or are illiterate	-	-	2/3rds came from 3 professions "trade industry and professions".

Table 2.1 (continued)

	(e) Definition of entrepreneur	(f) Age at founding	(g) Educational level of founder	(h) Previous occupational) history of founder	(i) Previous company forming experience of founder	(j) Father's principal occupation
5. DANIELS (1963)	Schumpeter	Average 36-38 (Georgeians, manufacturing only)	Texas founders had an average of 2 years more education than Georgians	Data for manufacturing only: from manufacturing or professional ranks	About 45% of manufacturing founders had founded 1 or more previous businesses, usually in the same category of enterprise	More than 50% of parents of founders self employed (both states)
6. SMITH and CARTER	Implied definition of the owner of the business, not necessarily the founder	-	-	Typical owner had been formerly employed in a similar corporation, been self-employed, or in government service	-	-
7. COLLINS, MOORE and UNWALLA (1964)	Schumpeter	Average 52 yrs (A) (men only)	Average about 11 yrs (slightly) higher than state median)	-	-	25% self-employed 19% farmers
8. DELANO, JOHNSON and WOODSWORTH (1966)	Say, Schumpeter, Knight	Average 45 yrs (A)	Average slightly higher than state norm (B)	Formed companies in field where they had substantial work experience, or skills applicable to the type of business	About 60% had formed at least 1 previous business	-

Table 2.1 (continued)

Study	(e) Definition of entrepreneur	(f) Age at founding	(g) Educational level of founder	(h) Previous occupational history of founder	(i) Previous company forming experience of founder	(j) Father's principal occupation
9. ROBERTS and WAINER (1966)	Schumpeter	Average 32 yrs Median 36 yrs	Average: M.Sc., equivalent, or slightly above	Primarily development-oriented academicians and laboratory researches	-	50% were self-employed
10. DRAHEM, HOWELL and SHAPIRO (1966)	Schumpeter	-	-	Principally some phase of Research and Development work, in University laboratory or industrial firm	Most did not have previous business experience except as research project managers	The father "in many instances" was himself an entrepreneur or "executive".
11. ALPANDER (1967)	-	"Is about 50 years old"	54% had degree. Very much higher than national average where majority have only elementary education or are illiterate	Majority had previous employment in private sector in "related occupation"	-	Over half "merchant families"
12. INDUSTRIAL RESEARCH INC.(1967)	Schumpeter	Average 35 yrs	30 had college degrees: 9 had advanced degrees	Industrial experience of an unspecified nature except "technical"	-	-
13. SMITH (1967)	Schumpeter	-	Same data as Collins, Moore and Unwalla (1964)		-	

Table 2.1 (continued)

Study	(e) Definition of entrepreneur	(f) Age at founding	(g) Educational level of founder	(h) Previous occupational history of founder	(i) Previous company forming experience of founder	(j) Father's principal occupation
14. SUSBAUER	Schumpeter	Average 34 yrs.	Equivalent to M.Sc.	Wide. High mobility. 50% had 3 or more prior jobs.	Only 5 had previously formed a company	60% either business founders themselves or owners of farms/ranches
15. HARRIS and SOMERSET	Schumpeter	$\frac{3}{4}$ were aged 30-50 (A)	25% had secondary education (1% in total population) 68% had primary education (68% total population illiterate)	Various, but for last job prior to founding only, 61% were skilled manual or non-manual, (for whole population 64% in agriculture)	-	61% peasant
16. BOSWELL (1973)	-	Median 36	"Craft or "Technical qualifications. Almost half from elementary/ secondary modern schools	-	-	Large majority (21 out of 30) skilled manual or white collar/ supervisory

(A): Age of principle founder at the time of study, not at the time of foundation.
(B): State average is based on educational level of state population 18 years or more: all other references are to educational level of state population 25 years or more.

REFERENCES

1. The study of entrepreneurship needs a detailed case study of founding, taking as its model perhaps, Gouldner's study of succession in a gypsum plant. Gouldner, A.W. Patterns of Industrial Bureaucracy. London. Routledge and Kegan Paul, 1955.

2. A useful unpublished source is Susbauer (study No. 14) whose tables were a guide to the format of Table 2.1.

3. McClelland & Winter. Motivating Economic Achievement.

4. This only includes English Language studies, and it may be that studies in other languages are extant, but it is interesting that no such cross references seem to exist. Such a literature survey is outside the scope of this study but it might well repay effort: cross cultural studies with, say, Japan would be particularly useful.

5. For example, Delano, (study No. 8).

6. For example, Rubenstein, (study No. 2).

7. See McClelland and Winter Op.cit.
For example, see also Smith (study No. 13) and Marris (study No. 15).

8. Chinoy, E. Automobile workers and the American Dream. N.Y. Doubleday, 1955.

9. Two studies are exceptions: Smith (study No. 13) and Susbauer (study No. 14)

10. The relationship between social class and educational attainment scarcely needs further reference, but for U.K. see for example: Report of the Committee on Higher Education (Robbins Report) 1963. Table 4 p.42 Appendix 1.

Section II

The Empirical Studies

CHAPTER III

The Scottish Field Work

1. Drawing the sample

There does not exist, to my knowledge, any comprehensive listing of the kind of enterprise in which we are interested, i.e. newly founded independent firms. It is obviously impossible, within the financial limits of post-graduate work to discover all new firms established in this period, and a basic initial assumption was made that the search should be restricted to local and central government records, on the grounds that (especially in a government aided development area, as is all Scotland except Edinburgh) sooner rather than later, new firms will apply for registration and/or some form of government grant. It ought to be possible to derive a listing of firms making an initial application for government financial assistance, but an enquiry of the Board of Trade was rejected on the grounds of confidentiality. The next obvious source is Planning Authorities, who presumably must have records of all industrial and commercial premises, from which a listing of new applications or applications for change of use can be derived.

I therefore wrote to all Scottish Planning Authorities and the responses are contained in Table 3.1. In summary:

59 Authorities were written to, of which

52 Usable replies were received, reporting

302 "new" companies

Consideration of these replies indicated

(a) The nature of the records kept by the Authorities appeared to differ: some provided Industrial Indices,

others found it difficult to extract any useful information (see Table 3.1 comments). In some cases the information appeared inaccurate, e.g. 1 authority reported no new firms, whereas 2 appeared in my final listing and interviews were carried out.

(b) it was not usually possible, without direct enquiry of the firms, to decide whether the company was independent or a subsidiary.

(c) my letter requested information on firms which were "established" since 1st January, 1969, where "established" meant "not only those firms which have actually begun trading, but also those granted permission to begin manufacture who have not yet set up." This definition proved inadequate and it was not clear from replies exactly what was the real date of founding.

For these reasons, I decided not to use the information provided by the Planning Authorities. Given the present state of recording information on new enterprises, any listing will be incomplete. I therefore decided to use as my population firms which had registered as Limited Companies with the Registrar of Companies. This has the merit of being a standardised list, i.e. firms complete identical forms, and additionally the records contain much information about the firm's activities and directors, which allows selection to be made at an early stage without unnecessary reference to the companies themselves. I made an arbitrary decision to restrict my enquiries to the 12 months from 1st January 1969 to 31st December 1969.

The information set out here, therefore, is in respect of companies registered with the Registrar of Companies, George Street, Edinburgh, between 1.1.69 and 31.12.69 inclusive. The official numbers were from 46224 to 47158 i.e. covering 935 companies. (For comparison, a total of 24,128 companies were registered in Great Britain in 1969).[1] There was one missing entry. Of the remaining companies, 5 had been liquidated or withdrawn by the time of recording (April 1970), and in the case of 14 companies, no information was available about the location of the registered office. A total of 915 remained about which the following information was readily available

(a) the company title

(b) the address of the registered office, and any subsequent change

(c) the amount of nominal capital, and any subsequent change

(d) a brief account of the nature of the company's activities.

We are here concerned with (b) and (d) only. The information contained in (c) appears to me to be worthless, since the choice of amount seems to be unrelated except in the broadest possible sense to the real extent of the company capitalisation. This is borne out by the fact that subsequent entries often vary widely from the original figure. Three examples (from many others) will illustrate this.

(a) Firm 46309 (ship repairers) registered 6.2.69 with nominal capital of £100. this was amended on 14.1.70 to £900,000.

(b) Firm 46321 (house agents) registered 10.2.69 with nominal capital of £4,000. The annual report entered 5.3.70 shows

£850 nominal, £850 paid up.

(c) Firm 46779 (soft furnishings dealer) registered 23.7.69 with nominal capital £100. This was amended on 23.3.70 to £30,000.

(Note that the annual report of the Registrar of Companies published by the Board of Trade analyses new companies only by nominal capital.)

My preliminary analysis is therefore concerned with where the firm is registered and what it does, and a further "caveat" is necessary about the records. Where a firm is "registered" is not always where it has its main operating premises: in particular we would expect Glasgow and Edinburgh to be over-represented since out-of-town companies often require an office in these centres for convenience and/or prestige. (The recurrence of particular addresses also suggests that "ready-made" companies are produced there.) Where there has been a change of address, I have used the last shown one. Secondly, the description of the firm's activities is often vague, although it was possible to categorise each company in accordance with the Standard Industrial Classification.

One further example can serve to underline these warnings about the possible discrepancies between the official records and the realities of the situation. Firm 46854 knitwear manufacturers, are registered in Glasgow, with nominal capital of £5,000, amended later to £10,000. In fact, this company has established two factories on the islands of N. Uist and Tiree, the total cost of the development being estimated at £68,000.

The distribution of new company registration by Standard

Industrial Classification (see Appendix 3.1) and by geographical area (see Appendix 3.2) is set out in tables 3.2 and 3.3. These tables are produced directly from the Registrar's records and are subject to the errors indicated above. Additional statistical information on these companies appears in Appendix 5. There are no surprises: the Glasgow area has over half the new companies, the Edinburgh area over a quarter, whilst the South-West, the Borders, and the crofting counties can together manage only 5%. The most important areas of activity are, respectively, finance and business services, the distributive trades and miscellaneous services, with construction a poor fourth. Mechanical engineering clearly is the most important in the manufacturing sector.

2. Selecting the required firms. The records of the 915 companies were examined in terms of their activity and for obvious clues as to their ownership. All service industries, apart from computer bureaux,and all subsidiaries of larger, established companies were excluded. This first trawl left about 180 apparently independent, new companies, and detailed information was obtained from the Registrar's individual files: this information included:

a) the names and addresses of directors and officers of the company

b) the names and addresses of principal shareholders

c) changes in the above, and changes in share capital

d) accounts of trading

From this a list of 137 companies was drawn up, the remainder being largely discarded on grounds of being subsidiaries. This was a

recurring problem and the present form of records makes it very difficult to exclude completely such subsidiaries: each stage of the sifting process brought more to light. Of these, 59 companies were chosen for more detailed examination and interviews. The basis of choice was:

a) geographical - a wide spread was sought, but because of cost constraints a certain degree of clustering was inevitable. Geographically isolated companies were excluded, and these regrettedly included a large aluminium smelter in the South West and a glass making firm on the Islands, which with hindsight ought to have been included.

b) industrial - again a spread across industries was sought, although since the whole sample was dominated by mechanical engineering, this group predominated in those chosen for interview.

c) technological innovation - where clues existed on the records that innovation was involved, these companies were selected automatically for further investigation.

Letters were sent to each firm (see appendix) requesting an interview, and these were followed by a telephone call one week later. As a result of these enquiries, a further 22 firms were excluded. Some of these did not wish to be interviewed, and 1 admitted that the company was set up as an attempt to forestall future government legislation in its particular sector. How many of the 22 were "convenience" companies of one form or another I cannot say. Again, several turned out to be subsidiaries.

3. Visits and interviews. The remaining 37 companies were each visited once, and an extended in-depth interview was carried out with one or more of the original founders. The interviews were open-ended, but I worked to an outline schedule (see Appendix I), to enable some of the background data to be treated as pre-coded survey data. All interviews were tape-recorded and subsequently transcribed. Verbatim extracts are included in Chapter 6.

No difficulties were ever encountered in obtaining information, and the main problem was in bringing the interview to a close. Several interviewees indicated that they found the experience worthwhile to themselves, since it appeared to be the only occasion on which they had spent time to take stock of their progress, or indeed to articulate their goals. Several provided extensive hospitality during or after the interview: in the latter case notes were written afterwards where the tape recorder was inappropriate.

4. Follow up questionnaire. 78 firms remained which appeared to be both new and independent but which could not be visited. A brief postal questionnaire (see appendix I)was sent to these which attempted to obtain factual information comparable to that contained in the interview schedule. 39 replies were received (50% return rate which is above average for postal questionnaires).

Summary of contact with firms

	N	Percentage	Percentage Excluding "Others"
Interviewed	37	4.0	27.0
Selected for interview but not appropriate	22	2.3	16.0
Postal Questionnaire sent and returned	39	4.2	28.5
Postal Questionnaire sent and not returned	39	4.2	28.5
"Others"	798	85.3	-
TOTAL	935	100.0	100.0

The analysis of the 60 entrepreneurs given in Chapter 6 is based on the 37 interviews. Chapter 5 is based on interviews and the replies to the postal questionnaire with some additional reference to the Registrar's records.

Table 3.1 New firms reported by Planning Authorities

Planning Authority	Usable reply	No. new firms	Comments
Counties			
Aberdeenshire	Yes	10	-
Angus	Yes	3	-
Argyll	Yes	4	-
Ayrshire	Yes	10	Treat figures as approx.
Banffshire	Yes	2	-
Berwickshire	Yes	3	-
Bute	Yes	2	Planning permission only
Caithness	Yes	5	-
Clackmannanshire	Yes	2	-
Dumfriesshire	Yes	11	-
Dunbartonshire	Yes	-	1 subsidiary reported
East Lothian	Yes	12	Industrial Index
Fife	Yes	58	Industrial Index
Inverness	Yes	8	-
Kincardine	Yes	Nil	-
Kirkcudbright	Yes	Nil	-
Lanarkshire	Yes	6	"Permission to develop"
Midlothian	Yes	25	Includes subsidiaries
Moray and Nairn	Yes	3	-
Orkney	-	-	Acknowledged letter, no further reply despite reminder
Perthshire and Kinross	Yes	1	-
Renfrewshire	-	-	Acknowledged letter, no further reply despite reminder
Ross and Cromarty	Yes	5	-
Roxburgh, Selkirk and Peebles	Yes	11	Industrial Index
Stirling	Yes	14	-
Sutherland	Yes	Nil	-
West Lothian	-	-	Acknowledged letter, promised by phone to send list: not received
Wigtownshire	Yes	Nil	-

Table 3.1 (continued)

Planning Authority	Usable reply	No. new firms	Comments
Zetland	Yes	6	-
<u>Large Burghs</u>			
Airdrie	Yes	3	-
Arbroath	Yes	1	-
Ayr	Yes	Nil	-
Clydebank	Yes	2	-
Coatbridge	Yes	Nil	-
Dumbarton	Yes	2	-
Dumfries	Yes	1	-
Dumfermline	Yes	Nil	-
Falkirk	Yes	Nil	-
Greenock	Yes	2	-
Hamilton	Yes	Nil	-
Inverness	Yes	Nil	-
Kilmarnock	Yes	Nil	-
Kircaldy	Yes	Nil	-
Motherwell and Wishaw	Yes	Nil	-
Paisley	Yes	8	-
Perth	Yes	4	-
Port Glasgow	-	-	No reply despite reminder
Rutherglen	Yes	15	-
Stirling	Yes	Nil	-
<u>Counties of Cities</u>			
Aberdeen	Yes	3	Subsidiaries
Dundee	Yes	1	Subsidiary
Edinburgh	Yes	Nil	Not development area
Glasgow	-	N/A	Unable to provide information from records
<u>New Towns</u>			
Cumbernauld	Yes	2	-
East Kilbride	Yes	52	Industrial Index

Table 3.1 (continued)

Planning Authority	Usable reply	No. new firms	Comments
Glenrothes	-	-	No reply
Irvine	-	N/A	Unable to give dates of founding: Industrial Index
Livingstone	Yes	Nil	Industrial Index Subsidiaries only
Highlands and Islands Development Board	Yes	5	Manufacturing only
(59 Authorities) Total	52	302	

Table 3.2 Number of companies registered in Scotland 1.1.69 to 31.12.69

S.I.C. Order	1. W.Cent.	2. N.E.	3. S.W.	4. E.Cent.	5. Croft Co.	6. Bords.	Total
1	6	5	1	6	2	1	21
2	2			2	1		5
3	9	3		1	5		18
4							
5	2	1		3			6
6	4			1			5
7	30	4		11	3		48
8	2	1		3			6
9	7	3		7	1	1	19
10	8	1					9
11		1		1	1		3
12	9	3		7	1		20
13	7	3	1		1	2	14
14							
15	10	2		3	1		16
16	3	1	1	2			7
17	5	3		3			11
18	14	2		3			19
19	3	1		4			8
20	72	11		37	2	1	123
21							
22	24	2		14		1	41
23	95	22		43	3	1	164
24	95	23	1	46	3	1	169
25	13	4	1	8	1		27
26	78	23	2	43	8	2	156
27							
Total	498	119	7	248	33	10	915

Note. This table relates to information obtained directly from Registration records. Certain amendments made after interviewing and the enquiries are incorporated into table 1, Appendix 5.

Table 3.3 Number of companies by activity and area as percentage of total

S.I.C. Order	1. W.Cent.	2. N.E.	3. S.W.	4. E.Cent.	5. Croft Co.	6.Bords.	Total
1	0.66	0.55	0.11	0.66	0.22	0.11	2.30
2	0.22			0.22	0.11		0.55
3	0.98	0.33		0.11	0.55		1.97
4							
5	0.22	0.11		0.33			0.66
6	0.44			0.11			0.55
7	3.28	0.44		1.20	0.33		5.25
8	0.22	0.11		0.33			0.66
9	0.77	0.33		0.77	0.11	0.11	2.08
10	0.87	0.11					0.98
11		0.11		0.11	0.11		0.33
12	0.98	0.33		0.77	0.11		2.19
13	0.77	0.33	0.11		0.11	0.22	1.53
14							
15	1.09	0.22		0.33	0.11		1.75
16	0.33	0.11	0.11	0.22			0.77
17	0.55	0.33		0.33			1.20
18	1.53	0.22		0.33			2.08
19	0.33	0.11		0.44			0.87
20	7.87	1.20		4.04	0.22	0.11	13.44
21							
22	2.62	0.22		1.53		0.11	4.48
23	10.38	2.40		4.70	0.33	0.11	17.92
24	10.38	2.51	0.11	5.03	0.33	0.11	18.47
25	1.42	0.44	0.11	0.87	0.11		2.95
26	8.52	2.51	0.22	4.70	0.87	0.22	17.05
27							
Total	54.43	13.01	0.77	27.10	3.61	1.09	100.00

Reference

1 Board of Trade Journal. 20th May 1970. p.1387.

CHAPTER IV

The Economic Background: The Scottish Economy in 1969 and after

The entrepreneurs whom I have studied made their decisions to found new companies in the context of the prevailing economic environment of the late 1960s. This chapter sets out to summarise what that environment was: in a very special way the economy of Scotland is no longer what it was in 1969, nor a simple continuation of the trends of 1969, because one event has produced a massive discontinuity, has moved the economy of Scotland onto a new plane of activity, and that event was the discovery of north sea oil. This chapter makes little mention of oil, because noneof the entrepreneurs were concerned with it, indeed virtually no one in Scotland thought of oil in 1969: we are therefore dealing with the very end of the pre-oil economy of Scotland. In a sense we are also looking at the undistorted picture of the Scottish economy, at its underlying structural problems which even 20 years of oil boom may not solve, if such speculation is permissible. Certainly in the sense that Scotland bears many of the hallmarks of a colonial economy subject to economic imperialism, and that the exploitation of oil is largely a "foreign" based operation, one could argue that the undistorted picture of 1969 is a better one, quite fortuitously, for the examination of the context of indiginous entrepreneurship.

I would like to begin with an overview taken from a basic text-book on the Scottish economy[1], which I cannot better.

> "The main conclusion which we can draw from the evidence .....is that Scotland presently stands in some danger of reverting to the same position of 'poor relation' to England and Wales as existed for some time in the past. There are those, indeed, who would

urge that Scotland has never been anything else throughout the whole of the 20th century. Yet, there were indications during the 1960s that the position was changing. Particularly over the first half of the decade, the Scottish economy appeared to be making up some of the ground previously lost to the rest of the U.K. Industrial production rose more rapidly, earnings per man employed in industry increased relative to those in the national economy, and there was a distinct reduction in the unemployment rate. Most important of all, changes were beginning to occur in the structure of the economy, with a greater emphasis being placed on emerging, science-based industries whilst older, traditional trades were allowed to run down.

Viewing the entire decade in retrospect, however, it is difficult to be so encouraging with regard to future trends. The growth of industrial production began once more to lag behind the national average over the later 1960s. More significant, the numbers actually in employment stagnated between 1958 and 1968 and the rate of unemployment again rose to disappointingly high levels. Income per head in Scotland, as measured by the Inland Revenue returns, has fallen as a proportion of that in the U.K. since the mid-1950s. It has been the influence of factors such as these that has, in part, determined the heavy loss of Scottish population through net migration. Almost the whole of the natural increase was offset by the net loss of population experienced by the Scottish economy during the 1960s. Clearly both 'pull' and 'push' factors have been at work in determining the rate at which people have left the country. Probably the most important aspect of the latter has been the country's industrial structure. This has changed markedly, as we shall see in the next chapter, over recent years. Yet, the change, as noted earlier, has not been accomplished swiftly enough nor has it been sufficiently comprehensive to absorb the labour displaced by the contraction of certain of the staple industries. Given a slack labour market, a proportion of that labour has sought to find improved opportunities beyond the confines of Scotland."

We must now fill out this overview by looking at the structure of the economy and the way that structure is changing, by looking at the components of potential growth and in particular the human resources, and the investment in research, and finally by looking at regional policies designed by central government to alter the

basic structures and promote 'desired' growth. (Appendix 4 contains additional basic economic indicators for Scotland).

The Structure of the Scottish Economy[2]

The Scottish economy has long been characterised by its commitment to a relatively narrow range of industries, coal mining, iron and steel, shipbuilding, engineering and textiles, that is the staple trades on which its early industrial prosperity was founded in the 19th century. Scotland's industrial problems stem from this fact, since it was unable to secure any diversification in the face of foreign competition and the development of substitutes for the products of its traditional industries. More importantly perhaps, the picture has changed little in the last 50 years despite strenuous efforts especially during the 1960's to broaden the industrial base. We have therefore a situation in which there exists on the one hand an unfavourable industrial structure, and on the other hand a relatively energetically pursued regional policy designed to encourage changes in that structure. This is a period then of transition, during which new growth industries such as electronics, vehicles, and telecommunications have to replace the older styles: unfortunately there is no evidence that the rate of replacement is fast enough to compensate for the decline of the older industries, and Scotland is under-represented viz-a-viz the rest of the U.K. in terms of the growth industries.

The following two tables should make this picture clear. Table 4.1 gives the employment structure of both the Scottish and U.K. economies for 1968 (see also table 5.26 which relates the incidence of new foundings to these data). "A larger proportion of Scottish labour is committed to such staples as shipbuilding

and marine engineering, and textiles, precisely those sectors in which output has declined or stagnated in past years. Correspondingly, Scotland has obtained an inadequate share of the younger growth industries such as vehicles, and chemicals and allied industries. This dependence on traditional sectors again finds reflection in the higher proportion of Scottish labour devoted to primary and extractive industry. Here a total of 5.5 per cent of the labour force is employed as opposed to only 4.0 per cent in the U.K."[3]

Table 4.2 is an attempt to be more precise about the level of imbalance in the industrial structure, by the calculation of "location quotients" for each industry. Where the value of the quotient is greater than 1, Scotland has a more than proportionate share of a particular industry. Where it is less than 1, then the converse is true.[4] This table is particularly useful in indicating Scotland's deficiency in more modern forms of manufacturing, motor vehicles, chemicals, aircraft, electrical machinery and so on, that is in those sectors which have grown most in the U.K. economy since World War II.

Sector	Scottish Employment (000)	As per cent of Scottish Total (per cent)	U.K. Employment as per cent of Total (per cent)
Agriculture, Forestry and Fishing	68.1	3.2	1.8
Mining and Quarrying	49.5	2.3	2.2
Manufacturing:	749.2	34.8	37.8
Food, Drink and Tobacco	104.0	4.8	3.6
Chemicals and Allied Industries	34.5	1.6	2.2
Metal Manufacture	47.5	2.2	2.5
Engineering and Electrical Goods	187.0	8.7	9.9
Shipbuilding and Marine Engineering	48.0	2.2	0.9
Vehicles	38.8	1.8	3.5
Textiles	93.2	4.3	3.2
Paper, Printing and Publishing	58.7	2.7	2.7
Other Manufacturing Industries	137.6	6.4	9.4
Donstruction	198.8	9.2	7.0
Services:	1,087.3	50.5	51.0
Gas, Electricity and Water	32.8	1.5	1.8
Transport and Communications	154.9	7.2	6.9
Distributive Trades	274.3	12.7	12.2
Insurance, Banking and Finance	47.9	2.2	2.9
Professional and Scientific Services	275.4	12.8	11.7
Miscellaneous Services	177.0	8.2	9.3
Public Administration and Defence	125.0	5.8	6.2
Total, All Industries and Services	2,152.9	100.0	100.0

Table 4.1 The Structure of the Scottish and U.K. Economies by Employment, 1968

Category		Location Quotient
003	Fishing	3.3
002	Forestry	2.6
001	Agriculture and Horticulture	1.1
101	Coal Mining	0.8
102-109	Other Mining and Quarrying	0.5
Manufacturing Industry		
415	Jute	11.2
239	Other Drink Industries	4.4
273	Explosives and Fireworks	4.4
370	Marine Engineering	3.1
419	Carpets	2.8
VII	Shipbuilding and Marine Engineering	2.8
338	Office Machinery	2.8
370	Shipbuilding and Ship Repairing	2.6
417	Hosiery and Other Knitted Goods	1.9
341	Industrial Plant and Steel Work	1.9
214	Bacon Curing, Meat and Fish Products	1.9
312	Steel Tubes	1.6
X	Textiles	1.5
111	Food, Drink and Tobacco	1.5
211-213	Grain, Bread and Flour, Biscuits	1.5
414	Woollen and Worsted	1.4
339	Other Machinery	1.3
313	Iron Castings, etc.	1.2
XV	Paper, Printing and Publishing	1.1
384-385	Locomotives and Railway Track Equipment	
	Railway Carriages, Wagons, Trams	1.1
XIV	Timber, Furniture, etc.	1.0
311	Iron and Steel	1.0
V	Metal Manufacture	1.0
VI	Engineering and Electrical Goods	1.0
364	Radio and other Electronic Apparatus	0.9
XIII	Bricks, Pottery, Glass, Cement, etc.	0.9
IV	Chemicals and Allied Industries	0.8
271	Chemicals and Dyes	0.8
XI	Leather, Leather Goods and Fur	0.8

Category		Location Quotient
XII	Clothing and Footwear	0.7
383	Aircraft Manufacturing, etc.	0.7
361	Electrical Machinery	0.6
VIII	Vehicles	0.6
IX	Metal Goods, Not Elsewhere specified	0.6
381	Motor Vehicles Manufacture	0.5
Construction		
Service Industry		
XXII	Professional and Scientific Services	1.1
XX	Distributive Trades	1.1
XIX	Transport and Communications	1.0
XXIV	Public Administration and Defence	1.0
XXIII	Miscellaneous Services	0.9
XVIII	Gas, Electricity and Water	0.9
XXI	Insurance, Banking and Finance	0.8

Table 4.2 Location Quotients for Scottish Industry, 1968.[6]

Despite this rather unsatisfactory situation, it is clear that changes have been taking place, and indeed that employment-based statistics such as those given above mask certain growth sectors unless industries are broken down not into main order, but into minimum list headings. However, to begin at a macro level, Table 4.3 gives the overall picture of employment changes over a 5 year period, which indicates firstly the rapid growth in female employment (in the period 1959-69, the number of women actually in work increased by 12 per cent, while males in employment in the same period declined by 5 per cent[7]), and secondly, the decline in primary and extractive industries, uncompensated for by increases in the manufacturing sector.

	1963			1968		
	Male (000)	Female (000)	Male and Female as per cent of Total Employees (per cent)	Male (000)	Female (000)	Male and Female as per cent of Total Employees (per cent)
Agriculture, Forestry and Fishing	82	13	4.4	59	9	3.2
Mining and Quarrying	72	2	3.4	48	2	2.3
Manufacturing	498	236	33.7	507	242	34.8
Construction	180	9	8.7	189	10	9.2
Services	555	527	49.8	529	558	50.5
Total Employees	1,387	787	100.0	1,332	821	100.0

Table 4.3

The next table sets out to identify those industries which are expanding, and those which are declining in terms of employment. Note that this says nothing about <u>output</u>: in fact two industries which are declining in employment terms (metal manufacture and chemicals) are among the most rapidly expanding in terms of output, because of increasing productivity.

	Increase (+) or Decrease (−) in Employment 1960–8 (000)
Expanding Industries:	
Engineering and Electrical Goods	+30.6
Food, Drink and Tobacco	+ 5.4
Timber, Furniture, etc.	+ 3.9
Bricks, Pottery, Glass, Cement, etc.	+ 3.6
Paper, Printing and Publishing	+ 1.6
Vehicles	+ 1.0
Clothing and Footwear	+ 0.7
Other Manufacturing Industries	+ 0.2
Declining Industries:	
Shipbuilding and Marine Engineering	-20.8
Textiles	-16.1
Metal Manufacture	-10.8
Chemicals and Allied Industries	- 2.9
Leather, Leather Goods and Fur	- 0.7
Metal Goods Not Elsewhere Specified	- 0.7
Total Manufacturing	- 5.0

Table 4.4 Employment in Manufacturing Industry in Scotland, 1960-8.[9]

As indicated above however, these main order headings often mask the real picture. In the 'vehicles' industry for example, an expansion of 12,000 in the labour force of motor vehicles manufacture was almost exactly offset by a decline of similar proportions in employment in railway locomotive, carriage and track production. This illustrates a major problem of this period of transition: the growth industries have to run hard merely to stand still: they have first to make up the loss caused by declining industries before they can contribute to aggregate growth.

Efforts to redress the structural imbalance: foreign ownership

Given the structure described above, and the need to compensate for the decline of old staples by the development of new growth industries, two strategies are available:

a) to encourage indigenous firms, drawing on native enterprise and capital resources. Such a strategy is reflected in the various regional policies discussed below, and whose effects will be discussed in greater detail in Chapter 6, when the experience of the entrepreneurs here studied will be given.

b) to encourage outside interests to bring capital and enterprise into Scotland. The post war Scottish economy has in fact received a much needed impetus from this second source, although exact quantification of the extent of such assistance is apparently difficult. Johnston et al suggest "as a rough approximation we may say that investment by foreign firms may account for between 12½ and 20 per cent of annual capital expenditure by industry in Scotland. Foreign firms have made a very important contribution to the growth of employment. Against a background of virtual stagnation in employment, foreign companies have provided over 100,000 new jobs in Scotland since the war."[10] Table 4.5 gives the overall picture of foreign investment in Scotland.

Source	No. of Firms	Turnover (£m)	Investment (£m)	Employment (000)
North American	85	247	162	61
English	140	219	119	38
European	3	7	7	3
Total, all sources	228	473	288	102

Table 4.5 Foreign Ownership in Scottish Manufacturing, 1966.

Perhaps most significantly, the industries in which this foreign investment tends to be located are the very growth sectors which Scotland needs - electronics, business machines and computers, aero engines and vehicles. This is particularly so in the case of American investment, which has been expanding rapidly: by 1968, American-controlled business accounted for over 10 per cent of total employment in Scottish manufacturing, for 12 per cent of total output, and for an estimated 27 per cent of the country's manufactured exports. The indirect effects on the economy in terms of demands for new skills, and for subcontracted products, as well as the 'hidden' features such as licencing arrangements with indigenous firms, makes the "Americanisation" of Scottish industry an increasing reality, (and indeed the frequent references to things American by the entrepreneurs here studied shows the extent and depth to which American influence has spread). Again, one is speaking of the pre-oil days, and the evidence currently available suggests that foreign based companies are taking the lion's share of the business generated by oil exploitation, rather than U.K. (including Scottish) companies.[11] A recent survey by the Department of Industry[12] gives the following data

	Manufacturing Units			Non-manufacturing Units		
	No.	Total Employment	Estimate of N.S.O. related employment	No.	Total Employment	Estimate of N.S.O. related employment
All units involved	251	96,490	18,359	300	10,273	5,611
(including Units set up specifically)	34	7,926	7,896	163	4,790	4,595

Table 4.6 Employment in Scotland related to North Sea Oil activity, 1974.[13]

With regard to the new units, the survey reports "although a full analysis of the ownership and origins of these plants has yet to be undertaken, it is clear that some represent a diversification of established Scottish industry into activity relating to the offshore oil markets. A much larger number, however, represent newcomers from outside Scotland, i.e. from the U.S.A. and from other parts of the U.K."[14]

The long term picture therefore is one in which growth sectors of the Scottish economy have been dominated by foreign investment and enterprise, either at the expense of, or because of a lack of, indigenous efforts.

Indicators of Scottish economic activity (See also Appendix 4)

It is suggested[15] that the "structure of production in a region constitutes one of the major determinants of the level of income and hence of effective demand in that region. In turn, the volume of demand will dictate the level of economic activity...(so)...a region with decided structural advantages will, over time, gain in prosperity..... Once started, such a process can become self-reinforcing, with factors of production such as labour and capital being attracted in from outside the region. This was typical of growth, for instance, in the Midlands and South-East of England. ..... For Scotland, we should expect to find, of course, almost the converse of the position outlined above."

Evidence for these statements comes from the statistics for unemployment, industrial earnings and migration.

a) Unemployment. Since the interwar period Scotland has consistently had a rate of unemployment significantly above the national

average, and in particular has suffered a heavy incidence of cyclical unemployment derived from its dependence on heavy industry and capital goods manufacture.

Category	Scotland (per cent)	Great Britain (per cent)
Agriculture, Forestry & Fishing	4.3	2.8
Mining and Quarrying	5.0	4.0
All Manufacturing Industry	2.9	1.7
Total, all Industries and Services	3.5	2.2

Table 4.7 Unemployment rates in Scotland, 1968[16]

Moreover, Scotland has an unfavourable 'mix' of industries, as indicated previously, which means that even if the unemployment rates for the Scottish and U.K. economies were the same, industry by industry, Scotland would still have a high total rate of unemployment.

b) Industrial earnings. Whilst a high rate of unemployment has a significant influence on effective demand, it is important to look at earnings rates for those in employment. In fact, although growing recently at a more rapid rate, the level of industrial earnings in Scotland has remained consistently lower than in Great Britain.

Category	Scotland: Average weekly earnings s.	d.	Scotland: Percentage growth of earnings 1960-68	Great Britain: Average weekly earnings s.	d.	Great Britain: Percentage growth of earnings 1960-68
Traditional Industries						
Shipbuilding	502	8	85	485	5	73
Iron & Steel	497	9	67	501	2	51
Hosiery & knitwear	404	11	65	472	10	59
Growth Industries						
Chemicals & Dyes	476	10	75	484	8	65
Electronic Apparatus	519	11	63	443	11	60
Motor vehicle manufacture	465	4	65	546	5	44
All Manufacturing Industries	458	11	70	472	4	59

Table 4.8 Average weekly earnings of Male Manual workers in selected Scottish Industries, 1968.[17]

"The level of earnings in traditional industries in Scotland is significantly lower than in the 'growth' industries. Moreover, apart from shipbuilding, earnings in Scotland's traditional trades are relatively lower than in their counterparts in the national economy."[18] There is evidence however of a narrowing of wage differentials, given the higher growth rate of Scottish earnings.

c) Migration. One of the most significant features of Scotland's economic development during the 20th century has been the net loss of population experienced through migration, which has steadily increased since the second world war. To put it in an international context, between 1961 and 1966, Scotland experienced the highest rate of net emigration in Western Europe apart from Malta. (See Map 4.1[19] and

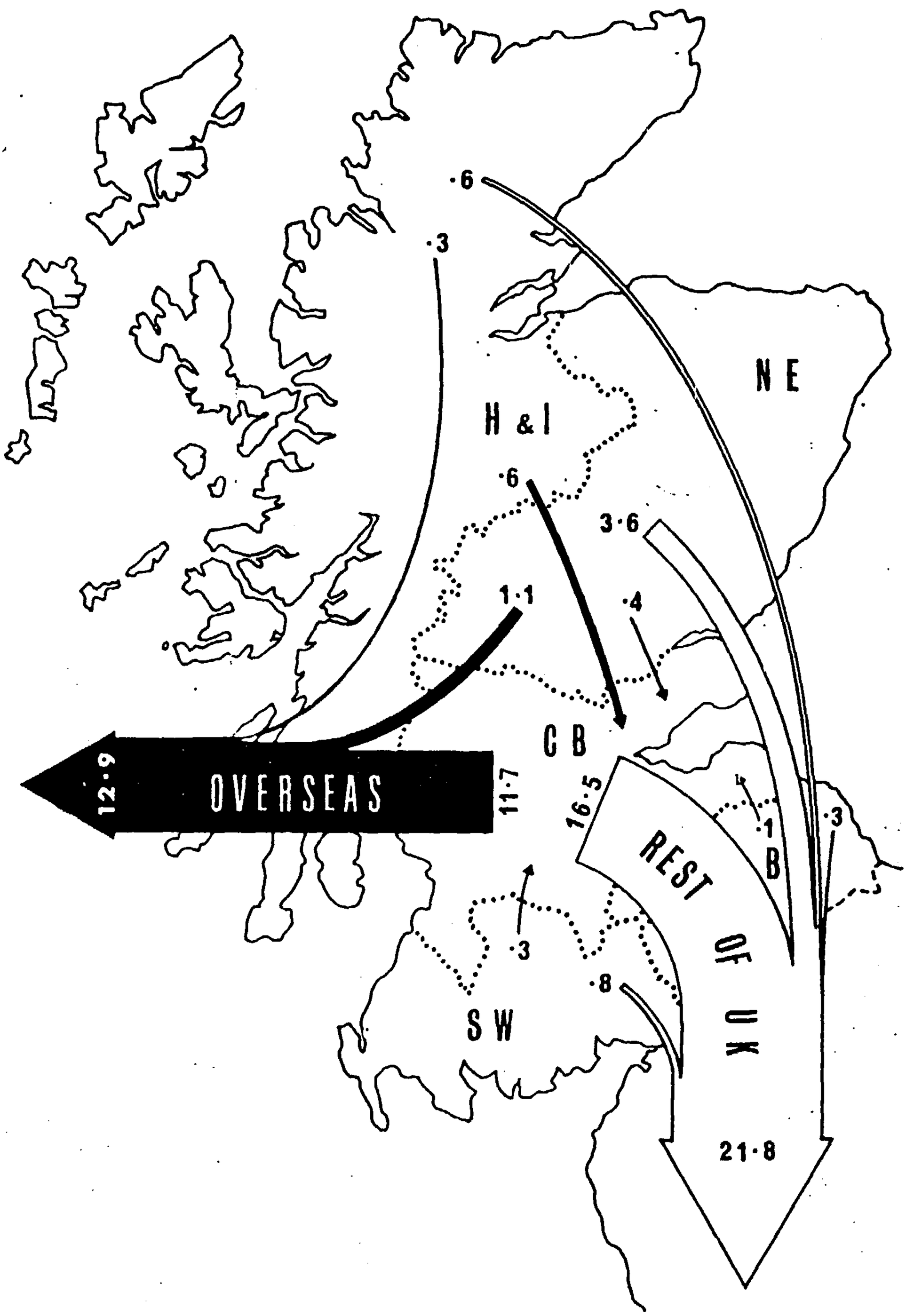
Map 4.2[20]). Migration has clearly been an escape route for labour in both the traditional and the expanding industries in Scotland. Both push and pull factors seem to have been operating: the staple industries have pushed surplus labour elsewhere, while higher earnings south of the border have been sufficient to pull labour out of even the expanding industries. The net results are clear, a further loss to the level of aggregate demand.

Table 4.9 is a summary of these economic indicators to put Scotland in context with other U.K. regions: its relatively poor position is obvious.

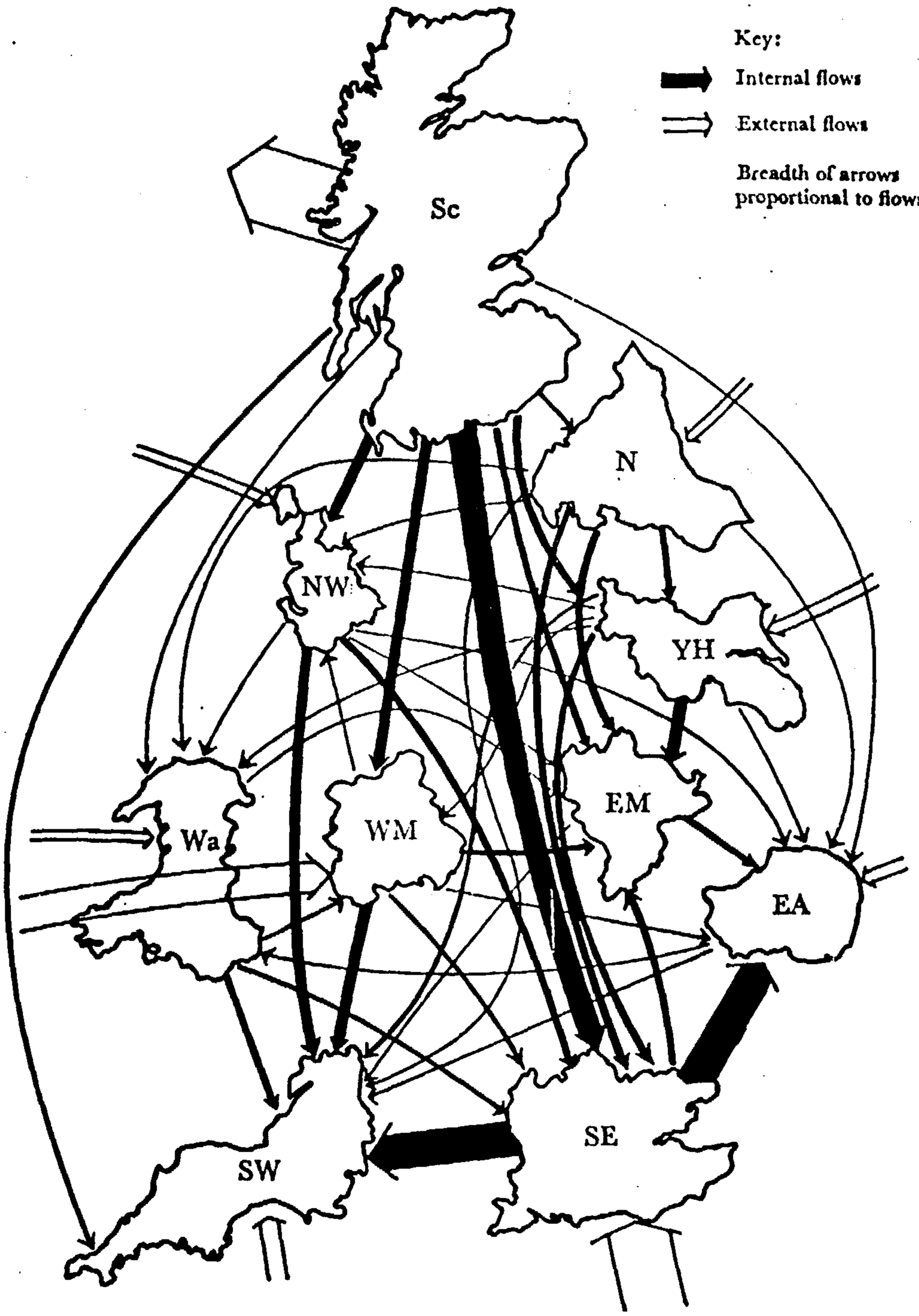
	Average unemployment rate, 1959-69 %	Average annual migration, 1961-66 (- = loss + = gain) 000s	Average weekly earnings of male manual workers in manufacturing industries as % of U.K. average, 1969
United Kingdom	2.0		100.0
North	3.6	- 7.1	99.7
Yorkshire and Humberside	1.6	- 1.0	93.2
East Midlands	1.4	+ 8.7	95.7
East Anglia	1.4	+11.9	91.9
South-East	1.3	+20.8	104.5
South-West	1.9	+24.8	95.8
West Midlands	1.8	+ 7.1	96.8
North-West	2.2	- 5.7	96.8
Wales	3.3	+ 1.9	102.0
Scotland	3.7	-38.8	97.4
Northern Ireland	7.1	- 6.9	85.9

Table 4.9 Some indicators of Regional Disparity in the U.K.[21]

Map 4.1 Net Migration from and within Scotland. 1961-64.



Map 4.2. Net Migration, U.K. 1961-6.



Components of Growth: capital formation and R. and D.

Given Scotland's relatively poor position viz-a-viz other U.K. regions, it is important to consider now what potential exists for improving the situation. Johnston et al[22] examined the existing (rather sparse) evidence on capital formation, economies of scale, and advances in knowledge in Scotland and come to the tentative conclusions that in terms of capital formation, i.e. investment, Scotland is "at least on a par with the country as a whole", whilst in terms of economies of scale "there is no evidence to suggest, at any rate from the early 1960s that Scottish industry is inefficient by national standards." However, advances in knowledge, which is of particular relevance to this study of entrepreneurship, appear to be restricted, if one uses R. & D. statistics as indicators of the growth of knowledge. (The unproven relationship between R. & D. expenditure and economic growth is outside the scope of this study). What proportion of U.K. R. & D. expenditure relates to Scotland appears not to be known. What is known[23] is the location of major R. & D. establishments (Table 4.10), which clearly shows Scotland's relative lack of such facilities. It is further suggested by Johnston et al[24] that the 7.2 per cent share of total research establishments is "almost certainly an overstatement of the money spent and the numbers employed on R. & D. It may well be that Scotland commands only around 5 per cent of the nations R. & D. resources, both human and financial."

	Private Sector					
	Industrial firms		Other private establishments		Research associations	
	No.	per cent	No.	per cent	No.	per cent
North of England	35	4.9	2	2.0	1	2.2
Yorkshire and Humberside	46	6.4	3	2.9	8	17.4
North West	79	11.0	4	3.8	2	4.4
West Midlands	82	11.4	2	2.0	5	10.8
East Midlands	40	5.5	-	-	6	13.0
East Anglia	14	1.9	5	5.0	1	2.2
South East	325	45.2	79	77.4	20	43.4
South West	40	5.5	2	2.0	1	2.2
N. Ireland	7	1.0	-	-	1	2.2
Wales	11	1.5	2	2.0	-	-
Scotland	41	5.7	3	2.9	1	2.2
United Kingdom	720	100	102	100	46	100

	Public Sector					
	Government establishments		Universities and polytechnics		All research establishments	
	No.	per cent	No.	per cent	No.	per cent
North of England	5	2.1	5	6.2	48	4.1
Yorkshire and Humberside	6	2.4	8	9.9	71	5.9
North West	14	5.8	8	9.9	107	8.9
West Midlands	9	3.7	8	9.9	106	8.9
East Midlands	4	1.7	5	6.2	55	4.6
East Anglia	16	6.6	2	2.4	38	3.2
South East	133	54.9	22	27.1	579	48.6
South West	12	4.9	5	6.2	60	5.1
N. Ireland	5	2.1	2	2.4	15	1.3
Wales	5	2.1	8	9.9	26	2.2
Scotland	33	13.7	8	9.9	86	7.2
United Kingdom	242	100	81	100	1,191	100

Table 4.10 Location of Research establishments in the U.K. 1968

Clearly, research activity has become located in one region, the South East of England, to the detriment of all other regions including Scotland. Whilst one could not compare the London area to the "science parks" of the U.S.A. (such as along Route 128 in Massachusetts mentioned in Chapter 1), clearly that area provides the industrial, academic and cultural environment in which highly mobile research staff wish to live and work, and one could conclude that Scotland lacks such attractions. Two factors are worthy of consideration however; firstly that <u>political</u> decisions govern research location in the large public sector, and Scotland has not been especially favoured in this regard, and secondly, as Chapter 6 will show, Scotland does have the "right" environment for some highly qualified personnel, and the threat of removal from Scotland to the South East is itself a determinant of entrepreneurial activity. In terms of the Scottish economy, however, there is a strong indication that further investment in R. & D., together with its related spin off, would be beneficial in growth terms.

<u>Human Resources</u>. Basic population statistics are given in Appendix 4 and reference has already been made to the continuing problem of emigration from Scotland, which despite a high rate of natural population increase has led to a very low rate of actual population growth. Moreover, emigration has largely concerned those in the fertile age groups, which has led to a fall in the net reproduction rate in recent years.

One aspect of the demographic structure which particularly concerns us here is the proportion of "high level" manpower in Scotland. Table 4.11 shows that in aggregate terms, Scotland is rather less well represented in terms of administrators, managers,

professional and technical workers (6%) than England and Wales (7%).

	Scotland		England and Wales	
	Number	Per cent	Number	Per cent
Order No. XXIV:				
Administrators and Managers	41,950	1.1	601,160	1.7
Order No. XXV:				
Professional and Technical Workers	188,760	4.9	1,880,090	5.3
Self-Employed, Employers, Managers, Foremen and Supervisors in the following categories:				
Primary Industries (I and II)	61,830	1.6	382,320	1.1
Order Nos. III-XVIII:				
Manufacturing and Construction	67,150	1.7	754,210	2.1
Order Nos. XIX to XXVII:				
Service and Other Industries	132,450	3.4	1,855,170	5.2
	492,140	12.8	5,472,950	15.4
All other workers	1,827,710	47.2	16,221,520	45.4
Economically inactive aged 15 or over	1,551,010	40.0	14,003,770	39.2
Total Population aged 15 and over	3,870,860	100.0	35,698,240	100.0

Table 4.11 High level manpower in Scotland, and England and Wales in 1961.[25]

The role of London as a governmental and commercial centre is usually given as a reason for this imbalance: head offices of large industrial concerns as well as governmental ministries and other public bodies are often located in London, and the career path of those included in the "high level" categories seems drawn as by gravity to this centre. Regional policies discussed below may even have added to this situation, since Scotland can be seen as somewhere to set up a branch factory where actual manufacturing is done,

attracting employment premiums, but leaving the managerial, research and marketing functions at a headquarters outside Scotland.

Nonetheless, on an international scale, Scotland like the U.K. as a whole, does have a good stock of high level manpower[26] and a well developed educational system able to maintain this stock. (For instance, Scotland has always offered proportionately more University places, [illegible] with 9½ per cent of the U.K. population, Scotland provides over 16 per cent of places in British Universities).

Regional Policies. Given the previously described imbalances in the industrial structure, the need to introduce new industries, and the need to stem the flow of emigration, it is not surprising that efforts have been made by Central government encourage the location of new enterprises in Scotland. The specific measures introduced are described below, but in general terms they can be said to be attempts to achieve one or more of the following economic or social goals

a) the amelioration of high unemployment by emphasis on employment-creating financial incentives.

b) the creation of new towns to achieve slum clearance in the main conurbations and permit the reduction of population concentration in the Clyde valley

c) the creation of "growth points" with transport and labour facilities attractive to industry.

Theories of industrial location, from Von Thunen and Alfred Weber onwards have stressed transportation and labour costs as determinants of optional location, and Clark's "index of potential"[27]

(which is really an index of accessibility) emphasises Scotland's disadvantage in geographic terms because of her distance from the London-Birmingham axis. Regional policy in broad terms can be seen as part of a strategy to compensate industry for this "loss" of comparative advantage and encourage the movement of firms away from prosperous areas to the less prosperous ones. However two studies question this in relation to Scotland. The Toothill Report of 1961[28] included a special study of comparative transport costs for indiginous and immigrant firms, and concluded that such costs were of little overall significance. Cameron & Reid[29] studied companies which had considered locating in Scotland but had then gone elsewhere. Their list of factors which appeared important in site selection are given in table 4.12. Their findings on transport costs are broadly similar to those of the Toothill Report, except that they found most companies were as much concerned with loss of <u>revenue</u> as of increased costs: they were worried about losing customers.

Ranking	Factor
1	Supply of trainable labour
2	Accessibility to main markets
	Local authority co-operation
4	Transport facilities for goods
5	Good local management/labour relations
	Fully serviced site
	Ready built factory
8	Accessibility to linked producers
	Factory rents
	Attractiveness of local environment for transferred key workers and executives
12	Transport facilities for personnel

Ranking	Factor
	Accessibility to main suppliers
	Local technical educational facilities
	Co-operation from local locating agencies
16	High productivity of local labour
Not mentioned by any firm	Low local labour rates

Table 4.12 Factors in site selection.[30]

This list of factors is also important in terms of the high number of apparently subjective elements which enter the location decision process. Let us now see in what ways government action has had a bearing on this process.

Policy Phases. a) 1945-60. The basis of post war policy was the Distribution of Industry Act (1945) and its later amendments, which established Development areas (the Clyde basin, Dundee and Inverness/ Dingwall) in which the Board of Trade could establish factory sites and provide the necessary services, and make grants. From 1950 onwards, all new industrial development was controlled by the issue of (or refusal to issue) Industrial Development Certificates. New town building at East Kilbride, Cumbernauld, Glenrothes, Livingston and Irvine also dates from this period.

By the late 1950s contraction of industries such as coal mining, textiles and shipbuilding led to the threat of high unemployment, and there was a change of policy, designed to counteract this, which extended the boundaries of the now re-named Development Districts.

b) 1960-65. Growth Points. By the early 1960s, mere juggling with boundaries within which assistance could be given, was seen to be inadequate, and political pressure built up especially in N.E.

England, and Scotland for a change of policy. The Toothill Report[31] published in 1961 challenged the employment-based existing policies and recommended the creation of areas of growth - areas which by virtue of their geographical location, communications facilities, development potential or established industrial base, offered the best prospects for generating economic growth.[32] These recommendations became accepted government policy in 1963, when 8 such growth areas were proposed - the 5 new towns, plus Vale of Leven, North Lanarkshire and Falkirk/Grangemouth. Development Area status was to apply to these areas irrespective of their unemployment levels, and a series of financial measures including free depreciation against tax liability were introduced.

c) 1965-69. The Labour Government's Industrial Development Act (1966) produced a further major change of policy, in substituting Investment Grants for tax allowances. Almost the whole of Scotland (only excepting the Employment Exchange areas of Edinburgh, Leith and Portobello) was designated Development Area status, and grants for machinery, buildings, and later training were introduced. The Regional Employment Premium system was introduced in 1967, which gave a cash sum to employers in respect of each full-time worker. It is in this climate of widespread direct assistance that the firms here studied were set up.

d) Post 1970 changes. Within a year of the establishment of these firms, however, the Conservative government had swept away the Investment Grant system and replaced it by depreciation allowances. The R.E.P. was also given notice of withdrawal, but the Industrial Training system was extended.

The Effects of Policy

It would appear that the effects of these changing policies cannot be evaluated in terms of benefit to Scotland, although the actual monies involved can be quantified. (Tables 4.13 and 4.14) To put regional incentives in perspective, about 1 per cent of Britain's resources are applied to regional policies, and Scotland's share is of the order of one third of 1 per cent.

	1963/4 (£m)	1965/6 (£m)	1967/8 (£m)	1968/9 (£m)
1960 Act: Section 2				
Factories on industrial estates	1.6	2.7	4.5	2.9
1960 Act: Section 3/1963 Act: Section 2				
Building grants (at 25 per cent of cost)	1.3	6.0	7.2	6.6
1963 Act: Section 1				
Plant and machinery grants (at 10 per cent of cost)	0.8	2.1	0.8	0.1
1960 Act: Section 4				
General purpose loans and grants:				
Loans	10.5	4.6	4.5	7.0
Grants	0.2	0.1	0.6	0.7
Total under above Sections of Acts	14.4	15.6	17.6	17.4
Scotland as per cent of Great Britain	47.7	36.8	38.0	31.6

Table 4.13 Financial Assistance to Scotland under Local Employment Acts.[33]

	Scottish Development Area (£m)	Total Development Areas (£m)
Investment Grants	58.4 (25)	190.8 (84.3)
Regional Employment Premium	40	100
S.E.T. additional payments	10	25
Local Employment Act, grants, etc.	17.4	54.9
Other	2.5	3.5
Total	128.3	374.2

Scotland as percentage of Great Britain = 34 per cent.

Table 4.14 Government Assistance to Industry 1968-9.[34]

Conclusion. This brief summary of certain aspects of the Scottish economy is given to emphasise the need which exists in Scotland for the encouragement of innovation and new enterprise, both from outside but also especially from within. One might expect, in view of the policies just outlined, to find strong responses amongst the new firms studied: chapter 5 will largely dispel such notions. One might expect evidence of a "leading edge" of new industries amongst the foundings: such evidence is sparse. Changes in Scotland's economy seem exogenously engendered, and indeed a question to be raised in the final section is why native enterprise seems so lacking.

References

1. Johnston T.L., Buxton N.K., Mair, D. Structure and Growth of the Scottish Economy. Collins. London and Glasgow 1971. pp. 69-70. I have used this text extensively throughout both this chapter, and Appendix 4.

2. Op.cit. Chapter 4.

3. Ibid. p.77

4. Ibid. p.77. The method of calculation is given at ibid p.98.

5. Source ibid p.76

6. Source ibid p.79

7. ibid pp. 80-81.

8. ibid p.80

9. ibid p.82

10. ibid p.86. Their emphasis.

11. See for example, "The tragedy behind oil euphoria" Sunday Times 22 June 1975 p.52, which quotes an Aberdeen study suggesting the U.K. share of the oil hardware market is a mere 32%, and criticising the "chronic under-investment and unwillingness to take risks of British industry".

12. Department of Industry. "Oil related employment in Scotland". Scottish Economic Bulletin No. 7. Feb. 1975. pp. 8-13.

13. Ibid p.10.

14. Ibid p.11.

15. Johnston et al., op.cit. p.90. See also A.J. Brown. The Framework of Regional Economics in the United Kingdom. Cambridge, University Press. 1972 especially p.98.

16. Ibid p.91

17. Ibid p.93

18. Ibid.

19. Scottish office. The Scottish Economy 1965 to 1970. A Plan for expansion. H.M.S.O. Cmnd 2864. Edinburgh 1966. p.3.

20. A.J. Brown. op.cit. p.257.

21. G. Hallett, P. Randall, E.G. West. Regional Policy for Ever?

Institute of Economic Affairs. London 1973. p.80.
Source: Central Statistical Office, Abstract of Regional Statistics, No. 6, H.M.S.O., 1970.

22. Op.cit., Chapter 9.

23. Ibid. See R.J. Buswell and E.W. Lewis. "The Geographical Distribution of Industrial Research Activity in the U.K." Regional Studies. No. 4. 1970 pp.297-306.

24. Ibid p.213.

25. Ibid p.227.

26. Ibid p.229.

27. Colin Clark. "Industrial Location and Economic Potential". Lloyds Bank Review. No. 82. October 1966. pp. 1-17.

28. Report on the Scottish Economy. Scottish Council (Department Industry) 1961. (The Toothill Report)

29. G.C. Cameron & G.L. Reid. Scottish Economic Planning and the Attraction of Industry Oliver & Boyd. 1966.

30. Ibid.

31. Op.cit.

32. Johnston et al. op.cit. p.321-2.

33. Ibid. p.331.

34. Ibid. Figure in bracket is the extra 20 per cent payable in Development Areas and is included in the main figure.

CHAPTER V

A picture of the Scottish entrepreneur and his firm from survey data[1]

This chapter sets out to answer two questions:

a) what are the characteristics of the founders of the firms studied (and how do these characteristics compare with the findings firstly of other British studies of 'managers' in industry, and secondly of the studies of the founding process referred to in Chapter 2)?

b) what are the characteristics of the firms themselves?

As indicated in Chapter III, the source material is taken from interview transcripts and from the replies to postal questionnaires. In the interview no attempt was made to administer a formal survey-type questionnaire, but within the open-ended framework of the interview an attempt was made to complete a schedule of background information, the answers to which could be treated as pre-coded interview data. This method (if such it is) produces less than complete sets of data, it is not totally systematic, but it does allow the free flow of response from the interviewee with the minimum of interruption. For example, an open question on the effect of founding on the founder's private life enabled me, inter alia, to 'code' for marital status, and number of children, without asking a series of formal questions - Are you married? How many children do you have? - which could well appear inappropriate in a discussion of the founding of firms.

Comparative data for British managers, where it exists, are taken from the following 8 studies:

1. Clements (1958)[2] a study of 646 'managers' in the Manchester area

2. Clark (1966)[3] a study of 818 'managers' in the Manchester area

3. Nichols (1969)[4] a study of 65 'directors' in Lancashire

4. Sofer (1970)[5] a study of 81 'middle level executives' in South East England

5. Dalgleish (1970)[6] a study of 120 small firms in S.E. Scotland

6. Pahl (1971)[7] a study of 86 'managers' from various regions who attended courses at Cambridge University

7. Boswell (1972)[8] a study of 64 firms, of which 30 were controlled by the original 'founder'

8. Birch & Macmillan (1972)[9] a study of over 1000 British Institute of Management members.

This list emphasises the paucity of Scottish data, although there is ongoing research at Aberdeen,[10] due for completion in 1976, which should shed light on managerial mobility.

Section A. The Founders

It is useful to begin this picture of the Scottish entrepreneur by examining those areas on which most comparative data exist: age, social class information and educational attainment.

1. Age. The following table 5.1 gives my data on Scottish entrepreneurs in Col. 1, with composite data from 4 other studies for comparison in Cols. 2 to 5

	Col. 1 Pres.study		Col. 2 Clark[11]		Col. 3 Clements[12]		Col. 4 Pahl[13]		Col. 5 Boswell[14]	
Age	N	%	N	%	N	%	N	%	N	%
under 30	8	17.3	22	2.6	27	4.1	28	32.5	9	32.1
30-34	9	19.5	72	8.8	163	25.2			8	28.5
35-39	9	19.5	161	19.7			30	34.8		
40-44	5	10.8	134	16.4	223	34.5	17	19.7	9	32.1
45-49	8	17.3	129	15.8						
50-54	3	6.5	122	14.9	186	28.7	11	12.7		
55-59	2	4.3	107	13.1					2	7.1
60-64	2	4.3	61	7.4	47	7.2				
65+	-	-	7	0.8						
TOTAL	46	99.5	815	99.5	646	99.7	86	99.7	28	99.8
Mean	38.9		46.2[15]		46.0		38.0[16]		37.0[17]	

Table 5.1 Age distribution

The overall distribution of the age of the Scottish entrepreneurs matches reasonably well the studies by the Pahls, and Boswell, and particularly in terms of the high representation of the under-40s, and in terms of similar mean ages. This is not surprising: Pahl and Pahl were especially interested in the mobile manager, and mobility is a feature of the early career; whilst Boswell was concerned with founders - and we have seen from Chapter II that relative youth is a very common feature of all the founders previously studied. The studies by Clark and Clements both include a higher proportion of older managers. It is tempting to suggest that there is a whole continuum of managers in which there is mobility and

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activity at the young end and stability at the older end, and that whereas the data of Clark & Clements represents the whole range, my own data, and those of the Pahls and of Boswell represent only the younger, active area. Two factors in my data caution against this suggestion, however. Firstly, there are a significant number of 'older' entrepreneurs who had been blocked in promotion and who then became active, and they are discussed in Chapter 6. Secondly, my data do not show a clear picture of the innovators as very young men. Indeed if we classify as 'innovators' those entrepreneurs whose <u>prime</u> reason for founding concerned invention or the application of an invention, their age distribution is as follows:

under 30	31-35	36-40	41-45	46-50	
2	1	2	1	1	N = 7

<u>Table 5.2</u>

The mean here is 36, only slightly below the mean for the whole sample.

If we further include in our classification as 'innovators' those entrepreneurs whose first stated reason for founding was to meet a market gap,[18] and whose <u>second</u> reason was invention or the application of an invention, the following age distribution results:

	Age	
	<u>Below Mean</u>	<u>Above Mean</u>
<u>Non-innovator</u> (23)	13	10
<u>Innovator</u> (14)	5	9

N = 37

<u>Table 5.3</u> X^2 = 0.79032. Sig = 0.3740

Here the relationship is in an unexpected direction, in that the non-innovators appear more often in the Below mean age category than Above mean age, and vice-versa for the innovators. The X^2 test implies this is in fact not significant, but tables 5.2 and 5.3 should caution us against a too ready acceptance of the alleged relationship between youth and innovation. (Chapter 6 examines individual cases in more detail).

Reference to Table 2.1 (col. f) in Chapter II will show that my data is however, broadly comparable to the previous studies of founding, 7 of which reported the mean ages of founders to be 40 years or less.

2. Social class background

Most previous studies have produced data on the social class of their respondents, usually in the form of the occupational background of fathers. There is no common framework of classification for direct comparisons across such studies, and I have therefore presented my own data in table 5.4 both in terms of the Registrar General's classification of occupations,[19] and in terms of the classification propounded by J. Hall and D.C. Jones,[20] since the other data can often be re-analysed into one or other classification.

Hall and Jones divide occupations into seven broad groups:

I Professional and high administrative

II Managerial and Executive

III Inspectional, supervisory and other non-manual: higher grades

IV " " " " : lower grades

V Skilled manual and routine grades of non-manual

VI Semi-skilled

VII Unskilled.

The Registrar General's classification is broadly similar, using a slightly less comprehensive 5 categories:

Hall Jones classification		Registrar Generals classification.
Grades I	I	(Professional)
II, III	II	(Managerial, Supervisory)
IV, V	III	(Skilled manual and routine white collar)
VI	IV	(Semi-skilled)
VII	V	(Unskilled)

Table 5.4 Father's occupation

Hall Jones	Registrar General	Col. 1 Present study N	Col. 1 Present study %	Col. 2 Clements %	Col. 3 Clark N	Col. 3 Clark %	Col. 4 Nichols N	Col. 4 Nichols %	Col. 5 Sofer N	Col. 5 Sofer %	Col. 6 Pahl N	Col. 6 Pahl %	Col. 7 Boswell N	Col. 7 Boswell %
I	I	9	30	20	63	7.8							1	3.3
II	II	3	10	17	279	34.7	49	75	42		36	42	16	53.3
III		10	33.4	11										
IV	III	1	3.3	22	360	43.6	14	21			27	31	11	36.7
V		1	3.3	22					39		16	19		
VI	IV	2	6.7	6	92	11.4	-	-			4	5	-	
VII	V	4	13.3	2	20	2.4	2	3			2	2	2	6.7
	N =	30	100	100	814	99.9	65	99	81		85	99	30	100

Most interest is shown in managers and founders whose fathers came either from the higher occupations, or from the very low occupations, i.e. from either the upper classes or the working classes. Table 5.5 is therefore a summary extract of the extremes of table 5.4.

	Per Cent in each category					
	Present study	Clements	Clark	Nichols	Pahl	Boswell
Registrar General's Classes I and II	72.4	48	42.5	75	42	56.6
Registrar General's Classes IV and V	20	8	13.8	3	7	6.7

Table 5.5 Father's occupation (upper and lower bands only)

The most salient point emerging from examination of the social backgrounds of managers and founders, which is confirmed by all the studies, is that the Upper Classes (Classes I and II of the Registrar General's classification or equivalent) are very heavily represented. Clark suggests[21] that managers appear to be increasingly drawn from Classes I and II, and my own data at least confirm that there is no marked reduction in the representation of these classes. Where my data do differ significantly is in the high proportion of entrepreneurs whose father's occupation was semi- or unskilled, Classes IV and V.

The age distribution of those entrepreneurs for whom data is available on father's occupation is as follows:

	Entrepreneurs age	
	Below mean	Above mean
Classes I and II		
Father's occupation	6	10
Classes IV and V	4	1

$N = 21$

Table 5.6 Age of entrepreneur by father's occupation, classes I. II IV and V only.

Clearly one can only infer broad trends from such a small sample, but the figures could suggest that older entrepreneurs are more likely to come from upper class backgrounds and that younger entrepreneurs can be drawn from lower class backgrounds as well as higher ones, which may imply that founding is becoming a relatively 'open' route for social mobility. However, further data on Scottish mobility patterns is required before one can begin to consider such a statement.

If we now turn to the first occupation of the entrepreneurs themselves (an indirect measure of social class background) we obtain the following distribution in table 5.7, with 2 previous studies for comparison.

First occupation	Col. 1 Present study N	Col. 1 Present study %	Col. 2 Clark[22] %	Col. 3 Acton[23] %
1. Apprenticeship	15	41.6	17.5	21
2. Manual	2	5.5	7.8	
3. Clerical	2	5.5	26.8	30
4. Laboratory assistant	-	-	15.0	4
5. Technician or draughtsman	2	5.5	16.9	28
6. Sales	1	2.7	3.9	3
7. Trainees	2	5.5	7.9	11
8. Professional	9	25.0	2.2	3
9. Managerial	1	2.7	1.7	
Unclassified (e.g. Forces)	2	5.5		
	N=36	99.5		

Table 5.7 First occupation

Again the pattern which emerges from the present study is one of extremes, with first occupations either traditional working class - apprenticeship, manual, or upper middle class - professional, managerial. Clark suggests it is possible to categorise the first occupation according to the advantage it confers in career progress, i.e. categories 1 and 2 No Advantage, categories 3 to 6 Limited Advantage, categories 7 to 9 Advantage. Table 5.8 shows this distribution.

	Present study	Clark
	(Percentages)	
No Advantage	47.1	25.3
Limited Advantage	13.7	62.6
Advantage	33.2	11.8

Table 5.8 Advantageous or non-advantageous beginnings

Again the pattern of the present study is clear, (and quite different from Clark's findings) in that the entrepreneurs either had an advantageous or a disadvantageous beginning, and few entered clerical, sales or technician jobs: indeed one can summarise by saying "either apprenticeship or profession". There is little difference in terms of age:

	Age	
	Below mean (39)	Above mean (39)
No advantage	47.0 (16.8)	57.1 (29.1)
Limited advantage	17.6 (65.0)	7.1 (61.4)
Advantage	35.2 (17.9)	35.7 (9.1)

(Clark's[24] figures in brackets)

Table 5.9 Advantageous or non-advantageous beginnings by age

Note that there does appear to be a trend in both Clark's figures and my own for younger managers/founders to be less well represented in those occupations conferring no advantage, and for younger managers/founders to be slightly more represented in limited advantage occupations. This may reflect changing occupational structures, or the effects of increased educational opportunity.

I have information on one item which other British studies have not covered, namely the extent to which there is a family background of ownership of business concerns, which again is an indirect social class measure. Table 5.9 gives this distribution: where the entrepreneur's father or brother had experience of ownership, this is categorised as 'strong', and where some other

relative (usually uncle) is mentioned, this is categorised as 'weak'.

		%	
No.	26	59.1	
Yes, weak.	7	15.9	} 40.9
Yes, strong.	11	25.0	

Table 5.9 Family tradition of ownership

This finding is contrary to most other studies of founding (see Chapter II, table 2.1 column j) which indicate that the majority of founders are sons of the self-employed or business owners. Obviously the fact that many entrepreneurs came from working class backgrounds is important here:

	Registrar General's class I and II	Registrar General's class IV and V
Family tradition of ownership	percentages	
No tradition	26.9	23.0
Some tradition	46.1	3.8

N = 26

Table 5.10

In summary, the social class background of the Scottish entrepreneurs I studied shows a clear dichotomy - either they came from working class backgrounds, and themselves went into traditional working class occupations, or they were from professional, upper

middle class backgrounds and went into professional occupations themselves. The distinctive feature of my sample is in fact the high representation of working class backgrounds.

3. Educational Backgrounds

Table 5.11 gives the distribution of the educational qualifications of the Scottish entrepreneurs, and Table 5.12 the age of completion of full-time education.

	N	%
Post Graduate degree	3	7.3
Degree	6	14.6
University Diploma	3	7.3
H.N.C., H.N.D.	7	17.1
O.N.C.	4	9.8
G.C.E. 'A' level	1	2.4
G.C.E. 'O' level	1	2.4
In-service (professional)	4	9.8
In-service (non-professional)	12	29.3
	N =41	100

Table 5.11 Highest Educational qualification achieved

Age	N	%
14	1	3.2
15	7	22.6
16	7	22.6
17	6	19.4
18	6	19.4
20	1	3.2
21	2	6.5
23	1	3.2
	N=31	100

Table 5.12 Age full time education completed

A striking feature of the educational background of my sample is its applied, practical nature (tables 5.13 and 5.14). (Even some of the degree qualifications were "sandwich" courses, with a strong applied element.)

Type of Education	N	%
Applied	33	71.7
Theoretical	13	28.3
	N = 46	100

Table 5.13 Education Type

	N	%
Apprenticeship	22	51.2
Not served	21	48.8
	N = 43	100

Table 5.14 Apprenticeship served

Nor should it be thought that it is the older men who contribute most to the picture of the 'time served' practical entrepreneur. There is in fact no discernable difference between those above and below the mean age.

	Age	
	Below mean	Above mean
Apprenticeship	10	10
Apprenticeship not served	8	9
		N = 37

Table 5.15 Apprenticeship by Age

	Age	
	Below mean	Above mean
Applied	17	5
Theoretical	14	5

N = 41

Table 5.16 Education type by age

Yet despite this practical emphasis, there is also a significant minority of founders who have university experience, i.e. 29.3% have a degree, post graduate qualification or university advanced diploma. (A small number additionally attended university for less than a full course and did not actually receive any qualification: about 1/3rd of all my sample therefore have had some university experience, which compares with other British studies shown in table 5.17). As noted previously, some of these degrees are 'sandwich' course qualifications.

	Present study	Acton	Clements	Clark[25]	Dalgleish[26]
Percentage of graduates among sample	29.3	19	25.4	35.1	14

Table 5.17

The studies included in Chapter II (see table 2.1 col. g) also refer to the relatively high educational status of their subjects, and this is especially marked in the case of innovators and technology transfer enterprises. As will be clear from Chapter VI, the amount of innovation amongst my sample was low, and the type and level of educational attainment of these Scottish entrepreneurs

may go some way towards explaining this. In the few cases where the entrepreneur was essentially an "ideas-man", and where his prime reason for founding concerned an invention, then the importance of a theoretical education is clearly evident, as table 5.18 shows.

	Type of education	
	Applied	Theoretical
Prime reason for founding		
"Ideas-man"	4.5	11.4
Others	65.9	18.1

(Percentages)

N = 44

Table 5.18 Education type by 'ideas-men' and others

It is also worth noting that almost all the entrepreneurs had undertaken short courses either arranged by their former employers, or at local technical colleges and Universities, both in their own time and as part of their general professional development. It would appear that this 'topping-up' process is normal for much of industry, but I have no detailed data on the nature of the courses. However, about 10% of my sample had undertaken courses (e.g. in commercial law) which they felt had assisted them in the actual founding process.

I do not have detailed information on the content of the courses which the entrepreneurs undertook, but a check was made on what may be called 'knowledge of formal business practice', i.e. elementary accounting, marketing and personnel practices, or some knowledge

of economics, or of office procedures. It is perhaps not surprising that just over half had such knowledge (table 5.19) in view of their previous varied occupational experiences.

	N	%
Knowledge of formal business practice	27	50.9
No knowledge " " "	26	49.1
	N =53	100

Table 5.19

However, it is interesting that those entrepreneurs who were in some way involved in innovation (i.e. whose first reason for founding was invention, or whose first reason was a market gap and whose second reason was invention) were the ones with little business knowledge.

	knowledge of business practice		
	knowledge	No knowledge	
Innovators	6.2	31.3	
Non-innovators	37.5	25.0	(percentages)
			N = 32
			corrected X^2 = 4.09. Sig. = 0.04

Table 5.20 Business knowledge among innovators and non-innovators

In view of the relatively high number of entrepreneurs who had formal business knowledge, it is important to ask whether they are professional managers in a Berlian sense.[27]

A very simple indicator of such professionalism is membership of one of the professional institutes associated with management (e.g. British Institute of Management). Table 5.21 indicates a relatively low membership rate amongst my sample, below that reported by Nichols[28] for the "Northern City" survey.

	Present study		Nichols
	N	%	%
Member	12	28.6	37
Non-member	30	71.4	63
	N = 42	100	100

Table 5.21 Membership of Professional association

In summary, the entrepreneurs I studied tended to have practical rather than theoretical educational backgrounds, with the exception of the few innovators. Apprenticeship is very common, amongst both young and old. There is a significant minority who have university experience, but this also tends to be "applied". Half the entrepreneurs had knowledge of business practice, and almost all had undertaken "topping-up" short courses during their careers. Only just over a quarter were members of professional bodies.

4. Geographic features

The distribution of the 1969 registered companies is given in Chapter III, tables 3.2 and 3.3. The distribution of the firms for which interview data is available is not given, since it reflects my ability to travel and there was no attempt to stratify

the sample to reflect the population distribution. However, certain geographical features can be reported. Firstly, in view of the frequent references in the entrepreneurial literature to marginality, I attempted to discover the place of birth of my sample, with special reference to non-Scots. The following distribution occurs:

Place of birth	N	%
Scotland	36	73.5
U.K. outside Scotland	8	16.3
Outside U.K.	5	10.2
	N = 49	100

Table 5.22 Place of birth

It is perhaps surprising that such a large proportion of the entrepreneurs (26.5%) are "non-native", and when one includes several of the Scots-born who founded in an area far removed from their place of birth (e.g. born in Western Highlands, founded in Edinburgh) then some support for the relevance of marginality can be seen to exist. There is however, only slight evidence that marginality in this sense is a feature of the innovators, as defined earlier; table 5.23 shows that whilst almost half the innovators were non-Scots, only a quarter of the others were born outside Scotland. The sample is small however, and the results not significant statistically.

	Place of birth	
	Scotland	outside Scotland
Non Innovator	16	4
Innovator	9	4

N = 33

Table 5.23 Place of birth of innovators and non-innovators

The second geographical feature which is notable is the fact that in almost all cases the founding was in the immediate locality in which the entrepreneur lived. Only 3 of the 60 entrepreneurs (5%) were involved in a change of address as a direct consequence of founding. Location, as we shall see in Chapter VI is an important factor, and not simply a passive one, which in several cases exerted a strong influence on the decision to found. Indeed founding is a clear strategy against managerial mobility.

5. Time-basis of founding

It is a feature of the founding process that many new enterprises begin life as part-time ventures, with their founders continuing full-time employment elsewhere. Over half the entrepreneurs I studied were of this type.

	N	%	
Full-time	29	48.3	
Part-time with other paid employment	18	30.0	51.7
Part-time with other Directorships	13	21.7	
	N = 60	100	

Table 5.24 Time Basis of Founding

The reason for this distribution is simply economic: the firms are too small to support full-time founders, at least in their early stages. (Dalgleish's study of small Scottish firms indicates that "the usual number of directors in charge of these companies was three:two full-time and one part-time."[29] Even in well-established concerns, therefore, the part-time director is a common feature). It is interesting to note also that those founders concerned with innovation are more likely to be part-time, which may indicate the level of risk involved.

	Time-basis of founding	
	Full time	Part time
Non Innovators	16	7
Innovators	3	11

N = 37

Sig = 0.01

Table 5.25 Time basis of founding by innovators and non-innovators

Section B. The Firms

The statistical tables on which this section is based are contained in Appendix 5.

1. The nature of the activities undertaken by the firms registered in 1969

Reference has already been made in Chapter III to the geographical distribution of new companies by activity, (see tables 3.2 and 3.3), which shows a half of the registrations from the Glasgow area, and a further quarter from Edinburgh. The most important activities are finance and business services, with manufacturing industry

accounting for under 1 tenth of all registrations, these again being heavily concentrated in the central belt. Appendix A5.1 shows that my own sampling has been from those activities which are under represented in the whole distribution of companies (e.g. 61.7% of the entrepreneurs were associated with mechanical engineering, which produced only 5.5% of new company registrations). The following data in this chapter relate therefore mainly to the manufacturing sector, and not the whole population of 935 registered companies.

One can ask whether it is possible to relate the incidence of new foundings to existing economic activity, in an attempt to assess whether changes are taking place in the industrial structure. (Chapter 4 has already described the extent of imbalance in the Scottish structure, and the need for a shift away from the old staple manufactures: it also showed the extent of governmental regional policies designed to help the process of change, either by assisting outside industry to move into Scotland, or by encouraging native enterprise). Clearly such an assessment is complex, and requires data not presently available, for instance mortality rates for both existing and new companies. Obviously if mortality rates were high, say, in new companies, then even large numbers of registrations would not alter the industrial structure appreciably. What we do know is that less than 200 manufacturing companies were registered in the year under study, and these were predominantly very small: this does not suggest to me a thriving growth of native enterprise, especially when it is remembered that real <u>new</u> enterprises form a minority, amongst English and foreign based as well as Scottish subsidiaries.

However, as a crude measure we can rank industries in terms of their share of employment, and also in terms of their replacement new registrations. Declining industries ought to exhibit low registration rates, and growth sectors high rates. Table 5.26 gives this information, and presents a mixed picture. It is certainly true that new registrations in primary and extractive industries, in shipbuilding and in textiles are low. But there is no compensating high rate amongst growth sectors such as chemicals, electricals and vehicle manufacture. Further, whilst the registrations in service sectors are high, one notable exception is in professional and scientific services. It was suggested, inter alia, in Chapter 4 that firstly Scotland had a good supply of high level manpower, and secondly that one consequence of foreign-based expansion was a tendency for the decision-making and research functions to be located outside Scotland, often at the company headquarters in London or in America. The paucity of new company registrations in the professional and scientific services presumably reflects this second factor and has long term implications for the first one, probably in terms of what is popularly called a "brain-drain".

Sector	Employment in that sector as % of Scottish total 1968	U.K. employment as % of U.K. total 1968	New registrations 1969 %
1 Agriculture etc.	3.2	1.8	2.4
2 Mining & Quarrying	2.3	2.2	0.7
Manufacturing:	34.8	37.8	21.6
3 Food, drink etc.	4.8	3.6	1.9
4,5 Chemicals, etc.	1.6	2.2	0.4
6 Metal manufacture	2.2	2.5	0.4

7,8,9	Engineering & Electrical goods	8.7	9.9	8.1
10	Shipbuilding	2.2	0.9	0.9
11	Vehicles	1.8	3.5	0.3
13	Textiles	4.3	3.2	1.7
18	Paper, printing, etc.	2.7	2.7	2.0
12,14,15 16,17,19	Miscellaneous	6.4	9.4	5.9
	Services	50.5	51.0	61.5
21	Gas, electricity, etc.	1.5	1.8	-
22	Transport	7.2	6.9	4.6
23	Distribution	12.7	12.2	18.5
24	Insurance, banking	2.2	2.9	18.8
25	Professional services	12.8	11.7	2.4
26	Miscellaneous services	8.2	9.3	17.2
27	Public Administration	5.8	6.2	-
		100	100	99.4

Table 5.26 New company registrations compared to existing levels of economic activity.[30]

When one takes into account the very low level of technological innovation which I discovered amongst the entrepreneurs, the picture of declining industrial activity becomes depressingly clearer.

2. Size of companies. As one would expect, most companies were small. Table A5.3 indicates that almost 90% were under 2 years old in terms of actual activity when the enquiries were carried out. It is not surprising therefore (table A5.4) that over half the companies for which information is available had 10 employees or

less. However, nearly a quarter had 20 or more employees, which shows the potential rate of growth available. (And growth is clearly an important feature of these companies, 88% of them expecting it in the following 12 months - Table A5.13).

3. Number of founders and Directors. (see table A5.5). 70% of the companies for which data are available (which includes all the manufacturing companies) have 3 or less directors. It is rare for companies to have more than 5 directors. The picture for founders is slightly different, in that 90% have 3 or less, and only 1 case had more than 5 founders. The difference can be explained by the fact that companies begin with a small number of founders and take on more directors, especially financial directors who are 'sleeping partners', as the company grows. Many of the companies for which information on directors was available were not in fact brand new, independent companies (see table A5.2).

4. Problems associated with founding. Table 5.27 makes it clear that the provision of capital and of marketing were the chief problems. Skilled labour supply was important to some companies, whilst the provision of unskilled labour was not really a problem. The stress placed on marketing is important, since conventional wisdom assumes that capital provision is always the most difficult problem to surmount.

	Provision of skilled Labour		Provision of unskilled Labour		Provision of capital		Marketing	
	N	%	N	%	N	%	N	%
Extent of problem								
Very Important	19	32.8	5	8.6	26	44.8	24	40.7
Fairly Important	12	20.7	6	10.3	13	22.4	18	30.5
Not important	27	46.6	47	81.0	19	32.8	17	28.8
	N= 58	100	N= 58	100	N= 58	100	N= 59	100

Table 5.27 Problems associated with founding

	N	%
Founders private sources	55	91.7
Commercial Banks	2	3.3
Others	3	5.0
	N= 60	100

Table 5.28 Major source of capital

Table 5.28 suggests that capital provision came in fact from the founders' own resources, and the role of the commercial banks is surprisingly unimportant. It would appear that my sample were

	N	%
Hopeful	23	48.9
Indifferent	22	46.8
Obstructive	2	4.3
	N= 47	100

Table 5.29 Attitude of commercial banks

practical men, with knowledge of techniques of production, who had enough local contact to provide capital, but who lacked, and presumably were unable to buy, marketing skills. As we shall see

in Chapter VI, ideal partnerships seem to have been formed when one founder was a technical man and the other a sales, or at least administrative specialist.

It is often held that the business environment is harsh for new enterprises, and much government-sponsored assistance has been developed, especially since the Bolton report on Small Firms,[31] in 1971. Even at the time of enquiry (1970-71) extensive assistance was available to industry, as we saw in Chapter 4, in the form of financial inducement such as investment grants. Yet picture which emerges from my data is clear - half of the firms had no contact with central government at all, almost half had no contact with local government, a quarter of those who replied found central government bodies either indifferent or obstructive, (and over 40% found local government indifferent or obstructive), and we have just seen that less than half found the commercial banks helpful. (Tables A5.11, A5.12). The simplest way of explaining this situation is that government and financial institutions did not appear to understand the real problems and day-to-day issues facing the new companies. Moreover and quite understandably, in the absence of legal and accountancy skills in these companies, the entrepreneurs were simply 'hot on the same wave length" as the Ministries and Banks.

Conclusion. This chapter has set out, largely in tabular and statistical form, a picture of the Scottish entrepreneur and his new firm. It is a picture of practical men, rarely innovators and often from working class backgrounds, struggling in what seems to them a hostile institutional background, creating small, but

growing companies in the context of Scottish industry which is declining but which to them offers the prospect of survival, growth and above all independence and autonomy. The next chapter will attempt to put flesh on the bare bones of this picture.

REFERENCES

1. The data are contained in 80 column I.B.M. cards in FORTRAN fixed format. They will be lodged with the S.S.R.C. Survey Unit in due course. Analysis of the raw data was done by me using Statistical Package for the Social Sciences (S.P.S.S.) versions 4 and 5.

2. R.V. Clements. Managers. A study of their careers in industry. Geo. Allen & Unwin. London. 1958.

3. D.G. Clark. The Industrial Manager. Business Publications Ltd. London. 1966.

4. T. Nichols. Ownership, Control and Ideology. Geo. Allen & Unwin. London. 1969.

5. C. Sofer. Men in Mid-Career. Cambridge U.P. 1970.

6. R. Dalgleish. The Small Scottish Company. Scottish Economic Review, Spring, 1970.

7. J.M. and R.E. Pahl. Managers and their Wives. Penguin. 1971.

8. J. Boswell. The Rise & Decline of Small Firms. Geo. Allen & Unwin. 1973.

9. S. Birch & B. Macmillan. Managers on the Move. B.I.M. report No. 7. B.I.M. London. 1972.

10. "Social and Occupational Mobility in Scotland". (S.S.R.C. grant HR 2173). Professor M.P. Carter, Department of Sociology, University of Aberdeen. No publications to date.

11. D.G. Clark. op.cit. p.157

12. R.V. Clements. op.cit. p.173

13. J.M. & R.E. Pahl. op.cit. p.47

14. J. Boswell op.cit. p.231. Note that only data for founders are used in table 5.1.

15. The mean for private industry, which may be a better figure for comparison is slightly lower, at 45.6. Clark ibid.

16. My estimate from data given. Pahl ibid.

17. My estimate from data given. Note median is 36. Boswell ibid.

18. As indicated in Chapter 6, 'market gap' is an opportunity for founding rather than a motive, and it is reasonable to look closely at the second reason for founding where market gap is given as first reason.

19. General Register Office. Classification of occupations. H.M.S.O. London 1960.

20. J. Hall and D.C. Jones. "Social Grading of occupations". British Journal of Sociology. Vol. 1. 1950. pp.31-5

21. Clark op.cit. pp. 68-70.

22. Ibid p.76. The categories used are those of Clark.

23. Ibid p.76. See also Acton Society Trust. Management Succession London 1956. page 10. table 5.

24. Ibid p.79. Re-analysed from his table 5.7.

25. Ibid p.40.

26. Dalgleish op.cit. p.18

27. See Nichols, op.cit. p.84 et seq. Of the professional manager, "if this is to mean anything it must imply that the managers skill rests upon an established body of knowledge and that his conduct is governed by norms which derive from a source independent of his source of income." A.A. Berle & G.C. Means. The Modern Corporation and Private Property New York. 1932.

28. Nichols, op.cit. p.198.

29. Dalgleish op.cit. p.17.

30. Comparative data taken from T.L. Johnston et al. Structure and Growth of the Scottish Economy. London 1971. Table 4.1, p.76.

31. Bolton Report. Report of the Committee of Enquiry on Small Firms. Cmd. 4811. H.M.S.O. London 1971.

CHAPTER VI

A picture of the Scottish Entrepreneur from interview data

It seems appropriate at this point briefly to address some problems of methodology and exposition. The previous chapter has in effect produced a picture of the 'average' Scottish entrepreneur, by reference to aggregated data. Such a picture, I would claim, has its relevance in particular, specified contexts (e.g. to state what percentage of entrepreneurs received governmental assistance is important in the context of the prior discussion of regional economic policies). However, I do not believe that an understanding of the nature of entrepreneurship will come from such sources, nor could such an understanding be gained even were the data to be collected and analysed in a more 'rigorous' fashion, e.g. within the framework of a search for causal generalisations amongst hypothesised 'variables'. Abstracted empiricism is no part of my sociological imagination.

How then can I present a 'picture' of the Scottish entrepreneur? My data consist of transcripts of recorded conversations, and it is my intention to present extracts, as far as possible verbatim, accompanied by my interpretations, which I take it that the reader will understand by reason of his, my and the entrepreneurs membership of a common language community. I am therefore suggesting that the reader's access to the entrepreneur be the same as mine, via every-day processes of intuitive understanding, through linguistic communication: that the 'validity' of my interpretation rests on verstehen, or more correctly, hermeneutic understanding.[1] I am aware of Zimmerman and Pollners'[2] distinction between the social world as a topic for investigation and as a resource for analysis,

and my emphasis in this chapter is on the latter. The entrepreneurs' accounts are "treated as untutored descriptions of 'what happened' in a setting whose features are uniformly and non-problematically available to (the entrepreneur, myself) and the reader alike."[3] Similarly, my imputations of motive should largely be taken as lay imputations,[4] except where specifically identified.[5]

1. <u>The reason for founding.</u>

I begin this picture of the Scottish entrepreneur by examining the responses to my questions about the reasons for founding their companies. I have identified certain patterns in these responses, and therefore present the data in terms of the following categories:

1. Innovation
2. Perceived market gap
3. Expressed need for independence.

These categories are most certainly <u>not</u> mutually exclusive, and indeed elements of all 3 are found in several cases. Nor is the second category a reason or motive in most cases, but rather an opportunity for founding which subsumes other reasons. None the less, the force of "because its there" was strong enough in several cases to warrant a separate examination. The categories therefore are for convenience of exposition, not to delineate reasons for founding.

Because of the wide range of activities, and reasons, Table 6.1 is presented as an approximate summary. (The "names" given are fictions to prevent identification of individuals).

Table 6.1 Summary of chief Reasons for Founding

	"Name"	Main Activity	No. of Founders	Reason for Founding
1. Innovation - "ideas men."	Fish Products	Engineering (fish processing)	1	P/T Left Civil Engineering because of illness. Bought inn, but "ideas - man".
	Payload Systems.	Scientific instruments.	3	P/T Astro-physicists. Needed instruments for payloads, engaged in design and invention.
	Laser Instruments	Optical/ laser engineering	2	P/T Both in optics research in Scottish University. Saw market gap.
	Al Engineering.	Greenhouse heaters/ Fluidics.	1	Originally wanted independence. Technical innovation related to hobby.
2. Perceived Market Gap	Fire Sprinklers	Fire fighting equipment	2	Previous co. took 'high level' decision to pull out of market, leaving no agency in Scotland.
	Boiler Chemicals	Boiler additive Chemicals	2	One founder came to Scotland from Kenya for sake of sick child. Contact with other founder who knew of market Gap. Element of innovation.
	Scottish Textile Engineering	Textile Machinery	2	Main founder knew of market gap from previous experience. Element of innovation.
	Jig & Tool Co.	Engineering Tools	4	3 of founders worked for local firms which failed. Knew of market Gap.

"Name"	Main Activity	No. of Founders	Reasons for Founding
Central Structures	Engineering, Light Fabrication	3	P/T All work for co. in same field. Market gap not covered by employers.
Highland Machining	Engineering, Machining	2	Knew of gap in market. Also "ideas man". (1 founder "sleeping")
Welding Alloys	Specialised Welding Alloys	2	Both worked for American firm and saw gap in market.
Control Engineering	Control systems	2	P/T Both work for instrumentation co. and knew of market gap.
Engineering Prototypes	Precision Engineering, Prototypes	1	"Subsidiary" of larger co. Founder sets up satelite cos. to keep main operation small and to cover market gap.
Small Batch Engineering	Precision Engineering	1	"Subsidiary" to handle special/small batch jobs, i.e. market gap.
Highland Mechanical Engineering	Sheetmetal Fabrication	2	Previous co. taken over resulting in dissatisfaction. Market gap seen in area away from former company.

3. Expressed need for Independence.

a) Promotion blocked

Forth Chemineering	Chemical Engineering consultants.	3	Main founder's previous employer taken over by U.S. company, and own position threatened ("shunted up unused siding").

"Name"	Main Activity	No. of Founders	Reasons for Founding
Newtown Pressings	Sheet-metal Fabrications	2	Had own company previously: victim of take over.
Metal Fabrications.	Precision Sheet metal engineers	1	Had founded own co. previously. "Fell out" with co-directors. Original founding (1966) prompted by block on his career ladder.
Steel Holdings	Steel Stockholders	1	Worked for B.S.C. for 30 years. Promotion blocked. Moved to small firm, again blocked.
Northern Electronics	Electronic Relays	2	Reached limit of promotion in career. Co. taken over and new top management antagonistic. Innovation element.

b) Desire to remain in Scotland

Western Circuits.	Electronics. Printed circuits.	2	Chief founder suffered from 'large companyitis", didn't like future prospects. Other founder saw market gap.
Clyde Computer Services.	Data Preparation	2	One founder wished to remain in Scotland (ex - IBM and future promotion would have taken him to England). Also market gap.
Bruce Engineering	Light Engineering.	2	P/T One founder worked for English company who wanted to transfer him. Market gap assumed. Failed .
Installation Engineering	Light Fabrication Engineering	2	Previous Co. taken over, didn't want to be transferred. Market gap seen.
Cardpunch	Data Preparation	1	27 years with previous co., which merged with English co. was asked to transfer and he refused.

	"Name"	Main Activity	No. of Founders	Reasons for Founding
	Control Engineering	Instrumentation Services	1	Location guarantee: redundant at previous job and didn't want to leave area. Market gap.
c) Miscellaneous	Computer Coders	Data Preparation	2	Both founders wanted independence. Looked at several possibilities, but came back to business they both knew. Also saw gap in market.
	Western Welders	Welding Components	1	Wants independence: had done "moon-lighting". Also innovation in components.
	Coast Engineering	Precision Engineering	1	Assumed he would inherit father's business, but this was taken over. Went to Canada to raise capital so he could found own company.
	Central Management Services	Consultancy-Paper Tubes	1	P/T Wants independence, but mainly a tax arrangement. Has already founded 1 company and sold it.
	Electro-chem.	Electroplating & chemicals.	2	Both wanted independence. Also knew of market gap.
	Northern Air Services.	Air Charter	1	Ex Fleet Air Arm, wanted to stay in flying. Already (wealthy) landowner.
	Border Engineering	Engineering Machinery	3	Main founder has always sought independence. Dissatisfied with prior employers - over ridden by English H.Q. Also knew of market gap.

i) Innovation and "Ideas-man". It was made clear earlier that when drawing my sample for interviews I specifically sought instances of innovation, and indeed innovation has always been a key element of any discussion of entrepreneurship. It is therefore surprising that my interviews revealed so little innovation: for many of the entrepreneurs the only novelty was self-employment. This lack of innovation is especially marked in the field of technological developments, and if there is a Route 128 phenomenon in Scotland I certainly didn't find it. (This of course simply confirms the economic data on the country's industrial structure and its poor performance (pace the Americans) in developing new science-based industries). Of the 33 companies listed in table 6.1 there is one single case involving the popular view of the inventor "spinning ideas out of his entrails"; there are two cases of university-based research spin-offs; one case of industry-based spin off, and 5 cases of "secondary" innovation, e.g. companies established to meet known demands for existing products becoming involved in innovation at a subsequent stage. On the most generous definition of innovation this gives us 9 out of 33 in a sample biased towards the discovery of innovation. (To be more pessimistic, I began with 935 new registrations, and discovered amongst them 3 technological spin-off companies). Whatever else one can say about Scottish entrepreneurship in 1969, any reference to their constituting a 'leading edge' of development would be false, and we must look for other motives, other forces at work.

None the less, the innovators I did discover provide interesting material. Firstly, the inventor: this man was a senior civil engineer working on large contracts all over the world, until

struck down by illness which forced him to "retire" to a small public house, which his wife ran. Following a successful operation however, he was able to resume a fairly normal life, and his inventiveness led to his designing a machine for removing prawns from their shells (prawns being an important local commodity). The chain of events leading to this development is interesting: his pub is on the quayside of a small fishing port, and when certain repairs were being made to the fish quay his advice as a civil engineer was sought. This gave him contacts amongst the fishermen and he was able to introduce a few mechanical improvements into the local prawn factory: he also discovered that labour costs on removing shells were high which prompted him to investigate other methods. At the same time, through a personal interest in golf he invented a device to help golfers place their feet correctly in relation to the ball: his golfing friends introduced him to a local professional who in turn obtained sponsorship for the device from a golf magazine. I asked him about other products he had in mind[6]:

> Resp. The trouble with me is, I've got 101 things.... I mean, the way I've lived has always been to say....various machines, I mean, various specialised bits of machinery, we're always mucked about with bits of equipment in the line of business I was brought up in ... And this means of course we were always sort of plunging into the unknown to a certain degree. And I always found I was pretty successful at it. You know, getting an idea and developing it, and it coming off - for otherpeople. So I thought, well, why should it not come off for myself?

And later, in response to my question about the future:

> Resp. You know the sort of things I think about? I think about things like buying up a fishing boat, going out in the sea there, sucking.... going after prawns, and ... and using ideas

> that you'd read in other places and incorporating them into ideas of your own. I mean, there's one I've thought about prawns. The Americans have tried it, you discharge electricity into the seabed which forces the prawns into the water where they are easy to catch with nets. I wouldn't do that. I'd use a giant vacuum cleaner, using an air lift pump - no moving parts. Discharge the electricity, then suck them up.
> See, when a boat trawls, it covers an area and when it pulls its nets up it knows there are prawns in the area, but doesn't know exactly where. If you come and suck them up, you can moniter exactly where they are. Why cover a huge area. These are the kinds of thing I think about.

There are 3 preliminary points I wish to make about this biography and extract. Firstly, the importance of the social milieu. The ideas which this man had, arose and could only have arisen, out of his contacts with others, and their problems. Secondly, the relationship which exists between old experiences and knowledge, and new problems (and future intentions). It was suggested in chapter 1 that the view of knowledge which sees it as 'bits' which are capable of transmission in the technology transfer process is only partly true, and that it is <u>agents</u>, carrying within them whole stocks of knowledge as part of their personal histories, who are the carriers of the transfer. The two points are clearly related: the milieu provides the problems which "old" knowledge is tested against. (Notice the idea of the "vacuum cleaner" for prawn fishing: I presume that constant monitering of work in progress is a feature of the engineer's technical world view - pouring concrete, driving piles and so on involve measurement concepts such as rate of flow, which can be related and modified in terms of the goal in view. Fishing like other gathering activities does not employ such ideas. "To trawl" is a unit of activity which is measured at the end.

Fishermen simply would not think of monitering). Thirdly, there is the hint at the end of the first extract about independence, which we shall return to very regularly.

Before giving further consideration to these points, let us look at the companies I have called "spin-off". Firstly, Payload Systems Ltd., which manufactures scientific instruments. My very first questions about the nature of the company produced the following:

Resp. Now my own science is astro physics and in particular space astro-physics. This means that at an early age I was confronted with a lot of technical problems. I was one of 2 founder members in 1961 of a study group (at the scientific institution where he is employed). At that time we couldn't get anybody to build the rocket payrolls that we wanted. I went to the States in 1962 and the problem existed there too. But because of the way the States is operated there's lots of little jobbing firms. I came back here and had to get involved in technology - not because I was desperately keen to, but because there was no other alternative. Either we got involved or we didn't do the science. Two years later we were still faced with the problem. People just weren't interested. "We're doing very well, thank you." They didn't see the need for any new type of instrumentation. Then we started spending 80 per cent of our budget on American instruments, which we then had to modify. In 1965 we started contacting the Reps. of British Companies and pointed out that their equipment was twice as expensive as the American. It became obvious that British firms weren't "doing their homework." So I began to think - you know, this is the germination of the idea, in 1967, about - well, we were doing this thing so well, and people were saying, "By jove, thats just exactly what we want' - I began to sound out, to see if there really was a need.

Now, having decided that there is a saleable product then you have to get the guys around you. This is where you have to be fairly careful in choosing people that blend well. (Describes his discussion of the problem with second director whilst on a scientific mission abroad). I had a word with Terry about this because he was new to

the science and had met the problems first hand. So we talked it over, and thought, well, lets get together and see if we could form a company. Terry's speciality - he is a mechanical engineer by training, but he's got a strong bent in cryogenics and vacuum physics - so this looked excellent. I'm a physicist, fairly all round. Mechanical man, vacuum physics, cryogenics. Obvious man we needed next was somebody whose speciality was electronics, and thats the 3rd director of the company and he's electronics, pure and simple. (So we had a solid team) and more importantly we've all worked together.

The company has begun to manufacture not scientific payload and monitering instrumentation in the first place, but modular instrument packages designed for use in education and research laboratories, i.e. what they regard as an immediately saleable "bread and butter line", whilst responding to requests for the more specialised astro-physics equipment.

Again, some preliminary comments are in order. Notice the importance of a social milieu, in this case a tight knit scientific community which provided problems the founders were forced to solve for themselves, and which ideas they could then sell within the community. The milieu of one scientific establishment also provided the blend of different skills and experiences required to solve the production as well as the conceptual problems. In Chapter 1 there was reference to Barth's notion of spheres of value, with boundary exchanges diverted by entrepreneurs to their own benefit. This case provides interesting examples of the interplay of such spheres of value - scientific knowledge, production knowledge, economic resources, within the 'niche' of space astronomy. For instance:-

Resp. 1. I'm in a pretty privileged position. I serve on a lot of (European and U.K.) committees. This gives me an insight into (both sides of the instrumentation problem). ( )

M.G.S. ( ) Do you regard your full time job as a sort of safety net?

Resp. 1. No, I don't. The reason why .... personally .... its the access to the information. I.C.F.C. thrust it almost down our throats - "its a good thing that you don't leave there." Because we've got to get all this information from somewhere. Say you don't get the journals - well, we get them all. As a company we probably couldn't afford that and the public libraries don't get them.

Resp. 2. There's another thing which is a bit dirty. Another trick of Jim's. He puts his other hat on - he's the "Science Research Council man" ( ) and he gets the Reps. in who work for rival companies and says "thats very interesting, how do you do that?" He gets the working drawings and every damn thing.

Resp. 1. Well, its all business, isn't it? (laughs).

So the milieu is crucial. Secondly, we have again the way in which the transfer of ideas is not simply via 'bits' of knowledge (although reference to the journals shows we cannot ignore that aspect) but by blending together as an organic team various past experiences and knowledge. Thirdly the idea of independence is there but in a relatively muted form at least in the early stages of formation to which the above extracts relate. Fourthly, there is the clear perception on the part of all the founders of market gaps, i.e. commercially exploitable opportunities for those things they were forced to invent in the process of their 'normal' work. Finally, some reference has to be made to the penetration of American industry into the industrial structure, a feature we shall find is constantly recurring.

Let us now look at another spin-off company associated with a University. This company which produces optical and laser accessories was founded by 2 lecturers in the following way. They

began as consultants, responding to work provided through their University Industrial Liaison Organisation, but became disillusioned with this because they were not being paid enough nor was the scope wide enough. They originally intended setting up a consultancy-only business aimed at the needs of small companies, but they were pre-empted by the Ministry of Technology and another University who set up such a unit.

Resp. So, (both of us) are sort of business minded people, if you like, we did think on commercial lines, had long discussions about this over beer, sort of thing, and the next thing we thought of would be ... was - its difficult to know which is the cart and which is the horse in this sort of thing, but we were buying optical equipment for University Research and we detected that there were very few British firms in this field, manufacturing specialist optics, and in particular very few firms involved in the manufacture of ancillary equipment for laser physics. (Only one other firm making accessories). So again we conducted a sort of survey asking people in our knowledge, what their impression of the situation was, and there was a general feeling that the equipment was very highly priced because it was rated to the American market, which .... different set of values to our own. The other thing was, that about the same time (we discussed a very cheap way of getting subcontracting done, through government training centres). And we came across this sort of thing .... gained experience of working with this sort of thing in our University work, so ... the other thing was that we used to talk long and loud and in a sort of disgruntled way about how our labour government was spending our money in the form of industrial support. And it did occur to us that there really were terrific opportunities at that time to set up.

M.G.S. You said that you 'came across' subcontracting, when you started optical instruments. What do you mean by 'came across'?

Resp. In connection with University work we occasionally had to put jobs out which couldn't be done in the University workshops. To that extent I was familiar with the technical resources of the area.

In response to questions about their products, I was told that they

were previously concerned with laser applications in mechanical engineering, particularly in holography in connection with metal stresses. They had done work with another university on stress in the Q.E.2. turbine blades -

> Resp. Now the equipment for this sort of work is just not available, and one of the items that we're most pleased with is directly aimed at this sort of activity. (Good response from certain institutions and manufacturers). Another device that we're .... no, backtrack a little bit .... the first 3 things that we produced were 'bog-standard' - we're not proud of them, they are things that other people make, things that are not of particular merit in themselves, but they are basic equipment for holography. ( ) This was over trial run, to see if we could do it, and we could, so we went on to more ambitious things. (Describes differential micrometer for use in electronics industry). These are the 2 things that we're eager about, the holographic plate mount and the differential micrometer. These are the things which nobody else makes, and we think that we've made not a bad job of them. This is (laughs) being honest, because we're not really proud of the first things, but they were an exercise.

I hope these long extracts confirm the pattern which seems to be arising, and which was contained in the comments on the previous case. However, one further feature should be remarked upon here, since it becomes very apparent from now on. This is that the real innovation often comes after the company has been set up and some bread and butter activity already established. So we have astro-physicists producing first a series of educational instruments before going on with their high-vacuum specialisms, and optical physicists producing run of-the-mill laser ancillaries before venturing into their real innovations in holography. There is probably an element of caution involved: all these cases so far discussed have been part-time ventures. The ones which follow are

full time, and the safety net is not regular employment but a successful first product.

Such a situation is well exemplified in the next case, which is an industrial spin off. The founder explains:

Resp. Well we started making a thermostatically controlled parafin-fired greenhouse heating system, which is basically, in simple terms, a development of the normal greenhouse heater - you know, the type that has a wick and you have a little control thing.

I was working for a company that was making electric greenhouse heating and (they) said to me that there would be a demand for an oil fired heater which didn't require electricity at all. So we set up the company to do this - that was the first product. And this employs a precision restrictor to meter the fuel into the burner, which is in fact just a very tiny, accurate hole. We found that there is a demand for these in a technology called fluidics. That was the second product.

M.G.S. When did the second product come in?

Resp. When I was developing the heater I met a Rep. from a company who made nylon tubing and he said there were a number of small fittings which could be used with small tubing which had been developed for the fluidics technology. So I learnt of fluidics while I was developing it. Now it seemed to me that if fluidics expanded like electronics would have done, then there would be a need for a fluidic restrictor, which is the equivalent of an electronic resistor. As I've developed a couple of restrictors for the heater, it seemed to be a good idea to me to produce a range of restrictors, with different sized holes, so we did simply that.

M.G.S. You said this is essentially a 'precision hole'?

Resp. It is in fact a watch jewel.

M.G.S. Now who does the manufacture for this? Do you do it?

Resp. No. We buy the watch jewels from Switzerland in fact. All we do is grade them. But it took us quite a long time to make the rig, to grade them accurately.

M.G.S. These aren't made for the purpose that you're using them?

Resp. No, no. They're for watches ..... They have to be accurate to 6 microns, which is pretty tiny. That again was a lucky discovery because I'm interested in watches and clocks. (The room in which the interview took place contained 7 clocks including 'grandfathers'). I thought there may well be a component, a standard component, available to watch makers which would be small enough to meter the fuel. I went along to a local watch and clock materials dealer, and got some bushes from him, some brass bushes. These were too big, so I went back and said "Surely there must be something else thats smaller" and he said "what about jewels?" so I got some jewels. Anyway, I managed to fit these into the little brass housing and they did meter the fuel at the right rate. This was the early development work on the heater. So we already had the test equipment and were producing them for the greenhouse heaters. All we had to do was to find a market for them.

M.G.S. So it wasn't so much a different product as a different marketing technique?

Resp. Thats right. It was an ideal second product because we were already making them. Just one other thing about the future - through this digital pressure guage (his third product) I was introduced to this anaethetist who said that there's a demand for a pressure guage to constantly moniter blood pressure, and apparently this is a problem which has remained unsolved for years, but I don't know, but fluidic techniques may well be applied to it, and perhaps nobody who is conversant with these fluidic techniques has had a go. This is the next thing that I'd like to have a go at.

I have left out of this account an important aspect of the reasons behind the founding, namely a desire for independence (since I shall be returning to it later): but it is interesting that given the spur to go it alone, and given an initial problem arising from previous employment, the solution to that problem, and a whole range of subsequent developments into new technologies, comes

through what I can only describe as the creative juxtaposition of ideas normally disparate - the need for "small holes", the knowledge from his hobby that watches contained components with such holes, and the ability to make an analogue between electronics and fluidics which suggested an additional market for such "small holes".

These four cases contain the strongest elements of innovation, but other instances were found, which I want to consider because they will show the extent to which the tentative comments made above are generalizable. Firstly, a firm which I have called "Highland Machining Ltd.", which is difficult to place in any single category: its founder is certainly another ideas man, as we shall see, but the company as it is presently constituted exists to meet perceived market gaps. Briefly, the founder had a chequered and varied career - apprentice engineer, Air Force navigator then instrument-maker, after the war self-employed as service engineer, (and also ran part-time a small tropical-fish-import business), then into N.C.R. as a fitter and during a period of 15 years rose to be tooling analyser for production engineering, then to a Tool & Guage company which was ailing, in which he progressed in just over a year to be chief engineer, works manager and finally Managing Director. Several things seem to have happened in 1968 which he can't place in order of priority - he became involved in some production problems involving 3-dimensional work for which he designed new machinery; he became increasingly disillusioned with the large company environment; and a friend bought a sculpting machine which wouldn't work, and which presented similar 3-dimensional production difficulties. What is certain is that he

left his employment, and solved the friend's problems in a month: they set up the company to produce the special machinery which was shipped to London and is now operating as a completely separate unit from Highland Machining Ltd., which became previously concerned with "bread and butter" subcontracting metal machining aimed at a market gap which the founder had long known to have existed. This complex and varied picture perhaps reflects the nature of the founders interests.

M.G.S. Can you say something about these ideas?

Resp. Yes. Firstly there is the 3-dimensional reproduction system.
Now this covers many things, its a complete new technology. It started out purely in sculpture, but in actual fact I was after a very much broader field. And this now does everything from coin making to artificial limbs manufacture.
But this is only one patent. I have then another one which we're working on at the moment, ( ) its a complete new system for the control and monitoring of blood transfusion or saline drip. And this is also a new development. Its a very, very cheap method of giving a warning to the nursing staff in an intensive care ward.
Another one we have is a flight control system which we aren't too far on with. But this is mainly in my head. Some of it's on drawings, but I haven't gone too far into that one.

It is important to know how this man became aware of the problems on which he is now working: the 3-dimensional one arose out of his previous employment; the medical device arose from personal experiences during several periods in hospital; and frequent business trips to London by air which ended in landing delays caused him to consider flight control problems. The following exchanges seem particularly valuable in understanding the process involved.

Resp. See that unit there. (Monitoring device, small circuit which fits in palm of hand). Now I had an electronics team and I gave them exactly what I wanted done, and how it was to be done. They produced me two massive great boxes that no-one in a hope in hell could put into a ward beside a bed. It was so good it was unbelievable. It was monitoring everything but the time of day. But you see they get so complex that they forget the basics. And because I'm a fairly ... I'm not a well educated bloke, with the result that I've got to get something that I've got to understand, and be very simple. And I've discovered that the simpler I go, the better my ideas become.

M.G.S. Now, the other question that arises is this. If you had these ideas whilst you were in employment, did you do anything to get your ideas put into practice through your existing employers? What about the 3-dimensional tool?

Resp. No, no. Because this was completely out with their field. And I had decided to leave them anyway because they were very, very much behind the times. They just had absolutely no idea of an expanding market, and because they were in basis a textile company. They were completely unsuited for engineering thought.

M.G.S. You didn't think of transferring to a company which was perhaps already in the field? That would welcome your ideas?

Resp. No. I didn't give it that much thought. I .... am a very independent person.

M.G.S. So at some stage then you decided that you would set up your own company to tackle these ideas?

Resp. I hadn't this in mind originally, I must admit. I merely was <u>disgusted</u> with the Scottish industrial scene.

The nature of this disgust can await further discussion. But I think other features are worth comment. Firstly, the allegation that new ideas are 'outwith' or 'unsuited to' a particular industry suggests a compartmentalisation of technical knowledge inimical to innovation, and which is based on the closed perception of what are and are not relevant 'problems'. (My previous reference to the

techniques of trawling which exclude ideas of continuous monitoring seems borne out exactly here). Secondly, here is a man who does not compartmentalise his own knowledge, but rather uses disparate experiences to create new solutions. Thirdly, the resistance to letting someone else produce his ideas. This theme of independence, and its converse the reluctance of existing organisations to accept innovations, is one I shall be returning to time after time. But whilst the above extract is fresh in our minds, let us briefly return to the greenhouse heating company founder:

M.G.S. When you had the idea for your greenhouse heater did you not think of developing this within the company you were working for?

Resp. No. I don't think that normally happens. (laughs) I think ....

M.G.S. Well, did you try and do anything else with the idea apart from setting up your own company?

Resp. No. I had tried to introduce other ideas in the company in which I was working and nobody was interested. You see the reasons people set up companies aren't to make money, generally. Thats not the reason. I mean it certainly wasn't my reason. Not that I can clearly define one's reasons. You know roughly what you want to do and you're not quite sure why. Now the people that I'd worked for had set up their own company 10 years ago, 1960. They hadn't set up the company to manufacture other peoples' ideas, and make a fortune out of other peoples ideas. So any ideas that I had were either no good, or they just didn't like 'em. I'm sure that must happen, pretty well anywhere. And anyway, my job was a sales manager, it wasn't anything else.

M.G.S. (What about selling your ideas elsewhere?)

Resp. One is a bit reluctant to sell one's own ideas. If it were someone else's idea, you'd have no hesitation. But its not.

(Notice, in passing, how compartmentalisation refers to organisational position as well as to the definition of relevant problems - the sales

manager is not expected to come up with technical ideas). What seems to be clear however, and I could support this with similar extracts for the other cases we have considered, is a certain possessiveness about ideas. Given the antagonism of these entrepreneurs to large scale organisations, which I shall demonstrate in due course even if it has only been briefly hinted at so far, and given the perception of gaps in the market, it is hardly surprising that they founded new firms in preference to any other method of putting their ideas into practice.

I now want to move on to yet another "ideas man", this time in the textile industry, whose will re-inforce many of the points already made, and which introduces another feature which is common to many of the companies studied, namely dual leadership, in which 2 or more persons divide up between them the various activities to be performed. It will be remembered that the astro-physicists each had an area of specialism, but together this still only comprised the <u>technical</u> part of the operation. They had to learn accounting, marketing and so on for themselves. A more usual solution to the problem of covering these varied activities is the one presented by the next case, the textile engineering company, in which one partner was the <u>technical</u> (design, production) man, and the other was the <u>commercial</u> (sales, finance) man. I have been suggesting up to now that one feature of the entrepreneurs is their ability to break out of compartments, and it may seem paradoxical that they allegedly parcel out the 'functions' of the firm. The paradox is more apparent than real. For day to day purposes there is a division of labour, but there is considerable overlap as well. In the case in point, it is the technical man

who has the overseas contacts (after many years selling machines) through which marketing can be done, but with the obvious assistance of his commercial partner who is in the travel business.

The "Scottish Textile Engineering Co. Ltd." produces specialist machinery for finishing knitwear. The technical founder has worked in textiles all his life as a design engineer and as a technical representative. He worked for 3 years for an American garment finishing company but left because of what he described as business sharp practice - the Americans licenced production of a sweater finishing machine which sold world wide: they wanted more than just royalties when the market got big, and they broke contract. He was out of work for several months during which time he designed the machine on which the company is now based. After trying to interest other firms to back him (but - again the possessive streak - he was not prepared to relinquish any of his independence or freedom of action), he persuaded his 'commercial' friend to join him: they had apparently talked for many years of one day setting up their own company together. The following extract shows yet again the importance of being able to draw on wide experience, to blend together different skills in order to produce the innovation.

Resp. 1 (Commercial). Well, you see this machine is based on 20 years of experience as a designing engineer - not 20 years as a designing engineer but 20 years combined with the knitwear trade and engineering experience.
Bob has been right through the Mill on associated items connected with knitwear, in the shape of laundry, heavy laundry equipment, drying....

Resp. 2 (Technical). And dry cleaning.

Resp. 1 I would say he's the only bloke in the country with the <u>combined</u> knowledge. You see you have skilled engineers who can design a machine, but they don't know the knitwear trade. Or the problems associated with it .... How on paper

you can make something theoretically perfect, when you apply it to the knitwear it doesn't work, its like making whiskey, there's a little thing to it.

M.G.S. But you know both sides of it?

Resp. 1. He knows both sides.

M.G.S. And can blend them both together. I see.

Resp. 2. You could apply tomorrow all over Britain for somebody expert in finishing knitwear, and there's nobody. Its all the hand iron, taking about 5 minutes to do a garment. This machine of ours can do 2 per minute, comfortably.

There is also a lot of development work being done on another innovation, a specialised knitwear tumbler drier - apparently the industry uses adapted laundry equipment which is not satisfactory. In the case of both innovations, then, market gaps are clearly perceived.

The penultimate case involving an element of innovation is in electronics, and it also concerns a design engineer, who founded "Northern Electronics Ltd." to manufacture miniturised relays for electricity supply industry. I shall have more to say about this company at a later stage since the immediate cause of founding was concerned with the limits of progress for the entrepreneur within a large national company. However, the product around which the company was formed is certainly an important technological innovation, in that it is a high voltage adaptation not produced anywhere else: indeed the entrepreneur actually invented it whilst working as chief engineer for the large company, who were unable to get it into production because they found the manufacturing problems too great. When they and he parted company, it was agreed that he should try to manufacture the relay and, with over

£30,000 of their backing, he has succeeded in overcoming the difficulties, mainly by inventing certain new jigs. This man had previously worked in another large national company as product engineering manager, which involved putting other people's ideas into practice. This then is a direct spin off company in the Route 128 mould, except that here innovation itself was simply a convenient product and the prime motivation for founding concerned the entrepreneur's attitude to potential career development in his former employment.

Finally, another 'ideas-man' with a strong desire to be his own master, who because he was a good craftsman was able to take small subcontracting jobs whilst still employed full time as a shipyard electrician. He then obtained a more substantial contract for work at a power station site and he was given leave of absence by his employers. His taste of freedom decided him to become self-employed, and within a short time a friend in the shipyard had introduced him to the stores manager who in turn explained a problem they were facing. Briefly, the problem concerned welding connectors, which join together the lengths of electric cable the shipyard welders carry around with them. (They may be working 500 or more feet away from a power source, and since they cannot pull that amount of cable after them, they carry it in, say, 100 foot lengths, joined by connectors). In the past, copper wire was used but this was being stolen as quickly as it was introduced, so the shipyard changed to aluminium. Unfortunately, this resulted in technical difficulties since it is difficult to link other metals - such as the usual brass connectors - to aluminium, and a lot of heat and corrosion is generated. This man did some experimental work,

whilst living on the proceeds of the power station work, and solved the connector problem. The shipyard placed orders with him, and he founded the company to meet these.

M.G.S. Did the solution take a lot of working out, or was it obvious?

Resp. It was obvious. Just a question of finding simplest form and also taking account of the ignorance of electricity of shipyard welders. (The connectors are bolted to withstand rough handling). My experience in the shipyard helped. Aluminium has special properties, I knew that from my apprenticeship days. And some reading. No one else seemed to bother with the problem and thats why no-one came up with the answer. Perhaps they didn't realise it would be so simple.

A feature of many of these cases has been the multiplicity of ideas and products within one company, and this man is a further example. He has already used some of the money from sales of the connectors to buy a lobster-fishing boat on the west coast, and he is negotiating a partnership with a local landowner there for tourist facilities to encourage sea-fishing: they intend to buy several boats in due course. As in previous instances, a hobby has provided knowledge of a fresh set of opportunities.

Summary

I have tried to grade the above extracts in such a way that they each introduce new features whilst re-inforcing previous comments. I am trying to build up my picture in the fashion of a jigsaw puzzle: to continue the analogy, we now have some of the edge pieces fitted in, but important corners are still to be discovered. This is therefore a useful point to see what we have got so far.

(1) The importance of the social milieu has been stressed.

Very often we are dealing with 'closed worlds' which provide the problems, the skills, and the people.

(2) At the same time, the entrepreneurs appear to be <u>non-compartmentalised</u>. They cross the usual boundaries which surround each specialised activity: they often have varied backgrounds and world views taken from several areas.

(3) They often produce innovations by being able to use knowledge from one area of activity for problems in another area. They are carriers of one set of experiences into a different set of problems: they themselves are agents of change. Their ideas are often simple, and they may come from what other people might regard as non-work areas of their lives, e.g. their hobbies.

(4) The entrepreneurs exhibit a possessiveness about their ideas, which because of their attitudes towards large organisations (to which we shall return), ensures that they will opt for independence rather than try to get their ideas put into practice through existing enterprises.

(5) They often concentrate at first on economic independence by producing viable goods after which they turn to developing their new ideas.

(6) One man rarely has all the experience required for economic success, and <u>dual leadership</u> is a common feature.

(7) The influence of American industry is noted by the entrepreneurs in two respects: it is aggressive, and it is successful. It may well have entered their consciousness as a model and as a challenge.

ii) Perceived market Gap.

In about 1 third of all the companies, the chief "reason" given for founding involved simply the perception of a market gap. I have said before that the existence of a gap represents an opportunity which enables other motivation to come into play. But I did find instances where the founders were left with little option but to respond to the gap, that is in cases where their former employers went out of business. These are probably extreme cases, so let us look at 2 of them first. "Fire Sprinklers Ltd." is a jobbing service for fire sprinkler systems, and that service is itself new, because the sprinkler business is in the hands of large companies who manufacture and install, and who undertake repairs and alterations. But notice what the founder says:

Resp. Basically, a firm puts in a new sprinkler system. Then 2 or 3 years later it makes adjustments to its layout, say it puts a new office in. All the sprinkler system has to be modified, because of fire regulations. Might be only £50 or £100 job. Main sprinkler companies will do it, but when it suits them. If they're chasing a £100,000 contract they are not worried about £100 worth of work for a previous customer. This is where we come in - we can do it quickly. Whereas it may take several months for a large sprinkler company to get the job quoted and started, we can probably get it all completed within one month ( ). So our speciality is speed.

This then is the market gap. But how did they find it, and what decided them to start on their own.

Resp. Originally, I was employed in (large Fire Protection firm) for 15 years. They went into sprinklers 5 or 6 years ago and I worked on them for 3 years. In June 1969, the week before we were due to go on holidays, people from the south came up and said they were packing in sprinklers - high level decision. This left myself and my partner very much at a loss to know what to do with ourselves. We had both been working for the same firm - he had been there about 4 years. I had originally started on sprinkler installation

and was then works manager for the factory making up the pipework and fittings, doing purchases and so on. (Partner) was on installation, the supervisor doing all the installation work.

We went away on holiday not even knowing if there was a job to come back to. Week before we went, the Manager and assistant manager of (employers company) had said to us 'why don't you start your own company?' We talked about it on holiday because we knew it was a big step. We didn't know then but these 2 people were also in the process of setting themselves up, and they took over an agency for sprinklers which (the company) held from a Dutch firm.

They decided to work the notice given to them, received their redundancy payments, and started looking for orders - the first one coming from a customer of their old employers. There has been steady expansion since, and obviously their speed of response is what their market wants. This entrepreneur has not entirely relinquished his hold on the resources of his previous employer however - his 2 brothers and his father still work for this company, and are available on a 'moonlighting' basis for evening and weekend work. And he still gets equipment from this firm:

Resp. Also we had to be sure of our supplies - it's a tricky business. Several people have tried (to go independent) and got their fingers burnt. The way we have got in has been an exception rather than the rule - because we were already in the thing. Fortunately, the chap who was sprinkler manager ( ) and who took out the agency, grew up just a few streets from the wife and me in Belfast, so I know him personally apart from business. So we'd a lot of things in our favour.

They also, via his father, borrowed a lot of equipment from the old firm until able to purchase their own. In summary, then, this founding was prompted by a policy decision of a large English company to abandon their Scottish operation, which left the soon-to-be-entrepreneurs threatened with unemployment or a move, or both,

and which also left an even larger market gap. The large company has remained an important (benevolent) resource in terms of old customers, redundant machinery, and supplier of labour. What is also interesting is that having established one company and seen it grow, the founders have started a second one to produce welded components, in partnership with yet another ex-employee of the original English company. (To my knowledge therefore, the policy of this English firm to pull out of Scotland has led to the formation of 3 separate new companies, and the turnover of just the one I have described was more than £30,000 in the first 12 months of its life). Chapter 2 referred to the regular occurrence of multiple foundings in other studies, but I only came across 6 instances among 60 entrepreneurs, and the above case was the most extensive.

A similar situation gave rise to the founding of the "Jig and Tool Co. Ltd.", except that here there were 4 founders, 3 of whom worked as tool makers for a small jig and tool firm which went bankrupt. The fourth founder was an insurance broker who 'did' the firms wages on a part-time basis.

M.G.S. When did you all come together?

Resp. 1. (toolmaker). It was pure chance, really.

Resp. 2. (insurance). These 3 had been talking about it.

Resp. 1. We had been talking about it. We knew the business was going down. (Resp. 2) knew it was going down. We talked about it, the 3 of us. (we were going to do it on a small scale but Resp. 2) suggested we look further into it, to find out if the finance company would let us carry on the payments so we didn't need deposits. We took over 3 machines. Lets face it, we were just tradesmen, and not used to business. There's no doubt (Resp. 2) helped us. We learned all our mistakes from (previous employer). We were the first lads he started. The experience was invaluable. There was just (Resp. 1, another

> founder, and the previous employer, who was out half the day) and we ran half his business. We learnt <u>his</u> mistakes.

If we except the insurance broker, who was familiar with commercial practice, and who had his own business already, the founders were reluctant entrepreneurs, but once the decision was made to start a new company to 'pick up the threads' after the bankruptcy, they obviously became totally committed to it, and found the previous experience of 'half running' the business very useful.

In the previous cases, parent companies retired from the scene leaving, in a more or less benevolent fashion, certain resources to be taken over and used. I now want to give an example of a new company which has a similarly benevolent relationship with a <u>thriving</u> large firm, in fact which has a symbiotic relationship with it. "Central Structures Ltd." are a light structural steelwork fabrication company, making such things as ladders, canopies, stairways etc. for industrial plant.

M.G.S. Can you go back to the beginning and tell me who had the idea to found the company and what the original steps were?

Resp. Our idea was .... The 3 directors of this company are executives or directors of (ABC Ltd.), and we felt that there was a certain class of work which was not financially viable as far as (ABC) were concerned.

M.G.S. Do (ABC) do the same kind of construction work?

Resp. Yes, but of a very much heavier nature. They might be dealing with 36 inch beams where I start shuddering at 12 inch ones.

M.G.S. So you all work for them?

Resp. We all work for them. And we decided to start another place, where we knew there was a nucleus of work there, for us to do, as well as taking work from other contractors. So our attitude was, well we're as well subcontracting it to us, as subcontracting it to any other engineering company in Scotland.

M.G.S. So this is really a <u>subsidiary</u> of (ABC Ltd.)?

Resp. No. That is the only tie-up between (ABC) and Central Structures Ltd. The fact that 3 of us draw salaries from (ABC).

M.G.S. Is there any conflict between you and the other company?

Resp. Oh, they're quite happy about it, for the simple reason that I have to take jobs for (ABC) which can be divided into large components and small components. They can only make a profit on the large ones. We can take the small ones and make it profitable because of our low overheads. We subcontract small items from (ABC) and thereby enable them to be profitable on the whole job.

I raised next the obvious question of why ABC did not simply set up a new division or direct subsidiary to cope with this end of the market. The first reply was that there was no skilled labour in the area of the main company's site.

M.G.S. Could (ABC) still not have built out here?

Resp. That again involves capital and spreading your wings too much. They already have various subsidiary companies, and my own feeling about that was that they were stretched far enough.

M.G.S. So there was a gap in the lower end of the market, your employer didn't want to move into it, and you knew labour was available here. Who really started the idea going? Was it any one person?

Resp. I think it was a general ... (ABC) have an executive committee. The people involved here have all been at (ABC) a long time - I've been there 20 years. So it was just one of those things that came out over your pint of beer at night, sort of thing.

Clearly we are here dealing with entrepreneurship of a different order from all the previous cases discussed. This is not a matter innovation, of putting ideas into practice. Nor yet of salvaging someone else's failures. This seems to me to be a straightforward case of altering the organisational structure of an existing

enterprise, in spite of the legal and accountancy fiction to the contrary. When I disclose that one of the founders, A, is also the 'A' of ABC Ltd., the true nature of the link becomes clear. What I am suggesting is that here is a large company, already diversified into several areas of activity, wishing to fill a market gap which has become obvious to its executives because they are having to subcontract work out to the companies. Instead of the usual remedy of creating a new product division, it spawns a separate company away from the main site, with its own autonomy (although the left hand always knows what the right is doing because the same people are involved in each company, and of course the years of experience, technical expertise and contacts are available to the "new" venture). If this were an isolated case, we could invoke the notion of idiosyncratic behaviour on the part of the founders. But it is not isolated, as the following 2 cases show.

Firstly, "Engineering Prototypes Ltd.", which is a small precision engineering company making prototypes and single pieces of work such as valves and bearings for local chemical process plants. The founder established his first company, in general engineering, in 1960 and it is his main activity: however he is opposed to large scale organisations on the grounds that "the rules change somehow" when a company exceeds 50 or so employees, and he has therefore dealt with expansion by the simple expedient of setting up new, "independent" ventures as "satellites" of the main operation. Engineering Prototypes Ltd. is one of three such companies. He claims that the people who actually ran these firms have complete autonomy, although I was unable to check this.

Secondly, "Small Batch Engineering Ltd." is almost identical to

the previous 2 cases. The founder owns a medium size engineering company, which discovered that it could not offer a full service to its customers, for instance could not cope easily with 'small runs' and 'one-off' pieces of work. To fill these gaps, 2 satellite companies have been formed, one of which is "Small Batch Engineering". Again, complete autonomy is claimed. At this stage, I do not want to draw conclusions from the discovery of these 6 satellites, because it is too small a number to generalise from. However, they will assume greater importance, I believe, when I look later at other examples of the reaction against large scale enterprise.

So far I have looked at ways in which market gaps were brought about by the demise of an already existing enterprise which then provided a seed bed for its successor: and of market gaps which thriving enterprises recognised and chose to fill by establishing 'satellite' companies which had their own freedom of action. In these cases, there is a good relationship between the established company and the newcomer. But examples were found where such a relationship did not exist.

The first example, "Control Engineering Ltd." which manufactures instrumentation ancilliaries for air conditioning and related systems, is parasitic on a larger company without that company being aware of the situation.

Resp. Without mentioning names, I'm employed as a sales manager for a company manufacturing air conditioning equipment. ( ) You cannot sell individual thermostats by themselves, its much easier to sell a system, in most cases you have a control cubicle. Now the company I work for doesn't make the cubicle, doesn't make the control panel, it subcontracts, and eventually it even stopped doing this so we had to find another source. It seemed a profitable line of business to make the panels ourselves.

We decided the best way was to spawn a company. Limited company ( ) offered more privacy. It helped to sell the temperature controls for our employers. If we hadn't had a source of supply of panels, we certainly wouldn't have sold some of the schemes. This justified it morally. (sic).

M.G.S. When you the gap in the market didn't you consider going to your employer and doing this <u>within</u> the company?

Resp. No. My employer is based in Manchester. I have little contact with them. It would have been foolish to restrict oneself to one employer. And even mention of the idea may have triggered off "unpleasant circumstances". Would anyway have been tied. As it is, we have done some outside jobs which we would have lost.

M.G.S. What has been your employer's response?

Resp. Well, I'm the one who orders the equipment, as area sales manager. All they know is I'm getting it from "Control Engineering". I have got quotes from 2 other companies for the equipment we make, and they are <u>far</u> more expensive. Initially it was all above board - I got quotations from the other suppliers, but we were cheapest.

There is clearly an uneasyness about the ethics of the situation this entrepreneur finds himself in, although he is legally right, and probably extending his employers business. The remedy for this unease which he is presently considering is to leave his employer and devote himself full-time to his new company.

Resp. I think if I was starting again, I'd like to think I'd take the plunge and go in it properly. I really would. I would probably have to be kicked into it. I'm terribly cautious. I'm <u>frightened</u> to death of not making enough money in the first few months in order to keep my standards up. But really and truly what I think I want is a kick up the backside to force me to start full-time on the company.

These sentiments found echo in the other 'part-time' companies and seem to indicate the existence of a crisis-point which has to be

resolved in the light of knowledge about markets and so on. Since my sample is of limited companies only, it is understandable that not many examples like the last case arose: if the sampling had been wider the picture may well have been different.

Finally, I would like to describe a situation where the founding is prompted by the perception of a market gap whilst the founders are working for an existing enterprise, which they leave in order to compete directly with their former employer, i.e. where the relationship is competitive. "Welding Alloys Ltd." is such an example. (Previous descriptions of "Scottish Textile Engineering" and "Highland Machining" contain similar situations, as do several other companies not quoted). In this case, the 2 founders worked for an American company marketing specialised welding equipment. They knew there was a good market in Scotland but their employers were obviously more concerned with their English business.

Resp. I did try to make suggestions when I was working for the American firm but they didn't want to know. They were an O.K. firm, but I didn't agree with all they did - they didn't need to bring in foreign materials. The U.S. firm wouldn't set up a Glasgow office, despite our attempts. I would probably have stayed if they'd let us set up a Scottish office. I used to worry about how much better it would be with a Glasgow office.

Despite the obvious risks, they set up their own company. The total turnover of the only 2 companies in this business in Scotland (the American, and a smaller German one) was about £1½ million per annum. Welding Alloys achieved £80,000 in their first year and overtook the German company. This then is yet another example of the extent to which a company's ex-employees can bite into its business. (See again the Route 128 data on this point). Yet in this case, it need not have happened if the would-be entrepreneurs had been

given a degree of autonomy by their previous employer. We shall bear this in mind, along with the "satellite" issue, when looking at the final set of reasons for founding, the desire for independence.

Summary

Market gaps, which are opportunities for founding (or 'niches'), come to the knowledge of entrepreneurs in a variety of ways. Sometimes they are forced upon reluctant founders through the bankruptcy or withdrawal of the parent employer; sometimes they are seen from within a previous employment situation and acted upon either surreptitiously or in open competition. In a few cases the gap is perceived by the owners of already existing enterprises, who establish autonomous satellite firms to take advantage of it. Technological innovation is rare in all these cases, but they can offer something new - a specialised, or fast, or flexible service, which appears to be related, at this stage of their development at least, to their small size.

(iii) Need for Independence.

In over half of the cases I studied the responses to my questions about the reason for founding contained references to independence, to being one's own master, to "going it alone" and similar other everyday expressions implying autonomy over ones own actions. The reasons behind this search for autonomy are varied, and it is difficult to place them into neat categories. There are however 2 sets of reasons which recur frequently.

a) a realisation that further individual career development

had been blocked;

b) a desire to remain in Scotland and a reluctance to be transferred elsewhere.

As in the case of market gaps, these situations often provided an opportunity for founding, or rather a spur to the achievement of an independence which had long been dreamed of. My questioning usually failed to elicit why independence was so important, and explanations usually came back at me either in personality terms ("I'm that sort of person") or as biographical description ("I've always wanted independence"). These were presented as self-evident and final truths, incapable of further analysis. Here are four typical responses.

1. Resp. I've always thought that I wanted to go into my own business.

M.G.S. What do you mean by "always"?

Resp. Since about ... since ... 21 I suppose. It seemed to be a good idea but there never seemed ... to be a satisfactory possibility. I'd considered it once before - I was going to make wrought iron work, and then another time I was going to make go-carts, but these never got further than the embryonic stage.

2. Resp. Oh, I think one always likes .... well, some people don't perhaps, but I've always wanted to work for myself, I don't like working for other people. The more experience I got the more I began to realise that somebody else was taking 5 per cent of my effort. I didn't see why I shouldn't take 5 per cent of somebody else's effort, eventually. I've read all these articles about why people start up business - there's a certain achievement in having something of your own.

M.G.S. Its not just monetary?

Resp. Its <u>not</u> monetary, its nothing to do with that. You have a freedom of action - if you make a balls of it you've only yourself to blame. My present employers are a shambles - I could clear them out. With our own company we can do what we want to.

3. M.G.S. At what stage did you do something positive about setting up the company?

Resp. It happened when another member of (my present employing company) was brought in to assist me. He expressed a wish to go independent, to start up his own business. The idea gelled, we were both interested. We talked about several businesses we could start but always came back to the one that we knew.

M.G.S. So really you were looking for a means to become independent. Anything really.

Resp. Yes.

M.G.S. What sort of business did you look at?

Resp. Firstly chalets in the highlands. I have a house up there and so saw some of the potential. ( ) Also hardware - screws, nuts, bolts. Partly because I have contacts in these fields. Ranged pretty wide. Also garment industry, because I had in fact worked for 2 years in that industry previously.

4. Resp. Oh. I've been thinking about it since I was 18. I've thought about it in the way of buying a lorry, and doing it alone .... buying an ice cream van.

M.G.S. Why? Whats the attraction?

Resp. I feel there's a great lack of this in this country. People are too content to sit back and let others do the thinking for them. I mean, they're gifted with a brain and a mind, and they don't want to .... they just .... let it go stagnant, they are not prepared to work on it.

M.G.S. Would you say in your previous job you weren't being ... stretched? There wasn't enough challenge?

Resp. There wasn't enough challenge, no. I would say that.

If these accounts do not help much in understanding what the motive for independence is at the level of the individual, they do at least point up the essentially sociological context of entrepreneurship, the requirement of an opportunity, a niche, whose perception is dependent on such features as occupational biography, range of

acquaintances, class-based world views (such as the residual protestant ethic contained above). These accounts also indicate a kind of latent entrepreneurship which has lain dormant, for many years in some cases, and which may be widely distributed in the population as a whole. Let us therefore examine in more detail the two sets of factors which appear most commonly to have been a spur to action.

a) Blocked promotion. I shall have more to say in the concluding chapter about the notions which our culture contains about "getting on", and would simply state here as a given that progression through an occupational career, with clear perceptions of 'up' and 'down', is 'normal' and that various measures of self and social esteem are related to this movement. In particular, movement 'up' implies (but may not in fact grant) greater power, greater autonomy, greater intellectual demands and greater esteem. Secondly, we have to invoke the idea that our culture has stamped every member with the imperative 'upwards'.[7] Given this scenario, we can now look at those instances which I discovered in which movement upward was no longer possible, and where founding was an acceptable alternative strategy. Firstly, the case of "Forth Chemineering Ltd.", which is a consultancy based firm in the chemical engineering field, whose founders had both worked for, and parted company from, a large American-controlled local chemical plant.

Resp. To go back in history, and discuss the personalities involved, and the basic thinking behind the establishment. (Started off with family business, which amalgamated with the 'B' group, which was in turn taken over by 'S' Corporation of New York, which proceeded to introduce modern business methods). I've been technical director of ('B')

group. It was, I suppose, in ones way of thinking, and I thought, well, I'd like to have a bash on my own, and I did not agree with some of the fundamental policies - there was a concentration on equipment, standard equipment, as opposed to what I'd been concerned with, which was large processes and project engineering. As I said, I left there ...

M.G.S. Was there some threat to your position there?

Resp. I would say so, yes.

M.G.S. Were you thinking of the future when you decided to go it alone?

Resp. Yes. I could see myself being shunted up an unused siding, shall we say. My colleague took the same decision 4 years earlier.

So this man clearly saw that not only was there to be no further promotion within the Group, but he was to be left to stagnate: a situation which manifested itself as follows

M.G.S. Does being your own boss affect your personal life?

Resp. I'm used to working long hours, up to 14 a day with ('B') Group, until after (the Americans took over) and especially latterly when I felt I hadn't a full job to do. I found myself looking at the clock, something I'd never done before. One of the reasons for leaving, in fact, was that I wouldn't face the rest of my working life like that. Since I started on my own, I've worked hours, never even look outside, quite engrossed.

But the actual reason for founding is something he cannot give, nor has he needed to provide an explanation of his actions before: they simply made sense to him.

M.G.S. What was your link with (your partner)?

Resp. (He stood up to the Americans for 2 years then left). I've known him personally for 20 years. We'd talked in the past vaguely about doing something. He actually did something, got busy.

Why did I link up with him? I never really thought actually why. It seemed to be the right thing to do. I suppose basically I'm a cautious sort of person who always wants back-up personnel.

My second example is more complex but contains similar elements to the previous case, especially the 'take-over', of which this founder underwent 3 experiences. The company is "Newtown Pressings Ltd.", a sheet-metal fabricators. The founder, after service in the regular army, joined a Sheffield firm of wire-drawers, as their Scottish sales representative. He discovered that there was a demand for chain link fencing, so together with a friend he started a firm to manufacture it, using his main employer's wire.

Resp. It all went well until my employers bought a chain link firm in England, and there was a clash of interests, which meant I had to declare mine. I think it took them about 3 hours to tell me to jump in the Forth, which I did with some alacrity. I soldiered on for another 4 years with the chain link firm, then/hated rivals of my previous employers brought out a firm in Paisley in direct competition to me. However, I became linked with another steel supplier in Coatbridge and I moved my manufacturing plant over to them, to cut down transport. Then the Coatbridge firm was bought out by my first employers. This was leaving me out on a limb, which was when I met (my co-founder).

M.G.S. So this came along at an appropriate moment?

Resp. Yes. I wasn't looking for sheet metal work, but .... The profit motive came into it, quite naturally. I decided I could make enough money to repay me .... I thought "I'll build a business and I'll try to get young chaps around me, and at the end of the day I'll fade out of the picture, leaving the financial side of it .... become Chairman of the Company or something like that." Come up once a month, you know. Thats what really motivated me, I think. Plus my age, which meant I would be retired in a couple of years or so and I didn't fancy that.

This man seems to have been plagued by threats to his position, and his move into a different industry is understandable, indeed he seems to have been forced out of his previous work: notice however the additional factor of early retirement which he was reluctant to accept.

My next example, "Metal Fabrications Ltd.", which is also a sheet-metal fabricators, has a founder with clear ideas about career progression. He came from what he describes as a 'humble' background, and he traces his progress from a "good influence" to which he was exposed after leaving school; this was a Glasgow Corporation Youth Club, where he was introduced to "drama and so on." He says he got the idea there that he didn't want to live all his life in a "room and a kitchen". (He can still visit his old school friends who live in the same buildings, and who, he says, cannot get out). His career progression was good, in view of his origins. After a 5 year apprenticeship, and 5 years as a tradesman, he worked for 10 years as a production engineer, becoming in 1965 assistant works manager (in a factory with over 500 workers). At this point he realised that all the senior positions in the firm were occupied by men younger than himself and that there was no future for him. He couldn't, as he says, get further up the ladder. His response was to find 2 backers, and jointly they founded a sheet-metal company. This was successful for 3 years, when it had grown in size to over 120 employees. Then the 3 directors "couldn't see eye to eye, and we parted." He found himself out of a job, so he repeated the process all over again, but this time with a backer who took a minority shareholding. His reason for having his own company is simple, and to him self-evident: he has all aspects of the business at his fingertips, and it is the natural progression of his career.

"Steel Holdings Ltd." a stockholder which specialises in low-grade steel, provides a further example of the way that perception of a block to further progress acts as a spur to seek other

strategies for 'getting on'. The founder worked as an engineer with the British Steel Corporation for 30 years, latterly as part of a team set up to establish a continuous galvanising plant. Progress on this slowed and he realised it was to be 'shelved': his salary was static and he felt if he were to progress he must change direction. He therefore joined a personal friend who had his own steel stockholding business, and who offered him a higher salary than B.S.C. For 1½ years he learnt the stockholding business, and then when he realised there was no chance of his ever becoming a director of his friend's business, he founded his own company to meet what he now knew was a market gap. It is clear that he had long wanted to become independent, and he is in business "for peace of mind, haven't a host of officials to go through. Sorry I didn't do it 10 years ago."

One of the companies to which I have already referred in the context of innovation, "Northern Electronics Ltd." which manufactures high voltage relays, provides an interesting variant on the 'take-over' theme. The founder worked as product engineering manager for a large English electronics firm until 1966, when he moved to another similar company as engineering manager, a position which he described as "the stage of limit of normal promotion in a large company, other than promotion to director level, which is at the dead end." Then the company was taken over by his previous employer, and he found that "the new top management were the men I had chopped down when I was there." His action in resigning is understandable, and he says that for 6 years he had been looking for just such an opportunity to become independent.

I have presented the last 3 cases in terms of brief synopses

simply to re-inforce the argument that a wish, even a vague, unstated wish, to become independent can become a reasonable strategy for "getting on" when other career lines are blocked. These examples also show how important the 'take-over' situation can be in stimulating new ventures by creating apparently hostile environments around the would-be-entrepreneur's existing career lines.

b) Desire to remain in Scotland. There were half a dozen companies which were founded not as a consequence of blocked career possibilities, but rather because the entrepreneur was offered promotion but that promotion involved a move away from Scotland. The strength of feeling expressed in these cases may not come through in the cold print of transcripts: I can merely say that the threat of moving apparently produced emotions normally associated with career failure, such as redundancy. By definition, these entrepreneurs are successful men and their decision to plunge into the uncertainty of new ventures is perhaps more striking than is the case of someone unable to make progress in his chosen career. Moreover, one could summarise their resistance to removal in the cliché "quality of life",[8] which may well have been an under-estimated feature in the work hitherto undertaken on managerial mobility and regional economic planning.

All the examples are quite unambiguous, and exhibit the clearest of all the motives which were expressed to me. (I don't think this group was more articulate, or self-conscious: the clarity of the statements seems to reflect the sharpness of the decisions). However, I have chosen a complex case, involving 2

founders, as the first illustration, because one founder, the respondent, exhibits clearly the feelings alluded to above, whilst other factors referred to in previous sections are also present. The firm is "Western Circuits Ltd." a printed circuit board manufacturer. The respondent had worked for an aero-engine manufacturer as an engineer for almost all his working life, and his father was a director of that company. He began to suffer what he calls "large company-itis" at about the same time that his co-founder was independently discovering a market gap. Perhaps more correctly, the co-founder who worked for a large tele-communications firm became associated through normal business activities with a photographer working for a subsidiary of the respondents company: together they realised that a gap existed in the market for printed circuits. Surprisingly they prepared documentation for the parent company suggesting that it moved into the gap, but determined to do it themselves if all else failed. Their idea was rejected, not surprisingly, and they turned their thoughts to the acquisition of capital. Meanwhile, the respondent had taken steps to set up a marketing agency and had resigned his employment.

> Resp. I was leaving, saying cheerio to everybody, doing the rounds, and (the photographer whom he knew personally) mentioned the idea, which seemed better than the other idea I had. I was in middle management at (the aero-engine plant), site manager at a factory. My next promotion was either going to be to the main factory in the Midlands where I'd already worked, and I didn't want to go there again, or I was going to go to the main Scottish factory where I knew too much of the internal politics, and knew that my job there was not going to be all that exciting, or I'd end up in Timbuctu and I'd already worked in Timbuctu (laughs) and I didn't really fancy any of the alternatives that I thought were going to be open to me. (We had

> just moved to a country property) and we very much liked the property that we lived in, and the idea of going to Timbuctu or the Midlands did not appeal to us at all, having found a place that suited us ideally. Moving away from Scotland wasn't attractive at all.
>
> I knew a lot of the (aero engine company) management structure and personalities involved. I didn't like what I saw. It all came to a head in 1968 when I definitely decided to get out on my own - it was to be a marketing company. Looking back now the marketing thing would have been a failure - it was better to remain within the technical field, even if a different technical field to my previous experience.

A remarkably similar picture emerges from my second example, "Clyde Computer Services Ltd.", a data preparation company. Briefly this is an independent company having many of the features of the 'satellite' companies previously referred to in that it has interlocking directorships and financial backing from an established (engineering) company which I shall call "Clyde Engineering". Respondent 1 in the following extracts is a director of Clyde Engineering as well as co-founder of Clyde Computer Services: Respondent 2, the other founder (Freddy) previously worked for a large, multi-national computer company, which I shall call "M.N.C."

M.G.S. Can you tell me about the reasons for setting up?

Resp. 1. Well, the reasons for that were that .... we saw an opportunity ... we have been friends for many years and although we were on different sides of the fence for a long time .... an opportunity presented itself which together we felt we could ... make use of. There is obviously a requirement for the type of thing that we're doing, and also the situation as far as Freddy was concerned was that he at some stage would have to leave Scotland and he didn't want to. We live very happily (here) and its because of that that we got our heads together and we .... we started the thing off with the backing of the main board of directors of (Clyde Engineering).

M.G.S. (to Resp. 2) It was suggested that in effect you had reached the top of the tree in this area, and that you would

perhaps have to move out. Was this the real motivation for setting up the company, or was it this awareness that there was a potential market?

Resp. 2. No. No. There's always been a desire ... in fact lots of people have this desire to run their own show, more than they can do with a large corporation. While I was getting a lot of satisfaction personally from being, you know, Scottish area manager for "M.N.C." and a fair degree of autonomy because of the geographical remoteness from London which is the head office operation, while that was the case, nevertheless there was a desire to get out, and you know, run your own show, and you know, start some enterprise that would have some future and could grow and employ people directly.

M.G.S. So this has been a long term ambition?

Resp. 2. Sure, yes.

M.G.S. Have you previously set up another company?

Resp. 2. No.

M.G.S. Or have you always been an Organisation man?

Resp. 2. Always been an Organisation man.

M.G.S. When did the idea start to be more than just a vague idea? When did you start to pin this down?

Resp. 2. 1964. Its been a long term objective to set up this kind of thing.

Further exchanges elicit the information that he was concerned with the manufacturing side of the M.N.C. operation in 1964, and there was then a change of policy in the company, to move back to being marketing-oriented.

Resp. 2. Well, I settled down, and said, O.K., you know, ambition is satisfied at the present time in terms of an entry into marketing management, re-entry into the computer marketing sphere ... ( ) ... 2 years I would say of relative ... <u>stability</u> if you like, consolidating myself within M.N.C. and within the Scottish area and the idea then began to formulate itself of, you know, the move out, and this sort of thing. ( )

M.G.S. Was there any, sort of final spark, final event that sparked it off?

Resp. 2. Oh, I think that .... you begin to, you know, look for different things which are not concerned really with business opportunities. There was a family bereavement, you know, and that was significant to a certain extent in terms of the way we were set up. We had then to decide, as Jock said, you have to decide whether you are going to leave Scotland and go into the big corporation, or stay in Scotland. A family bereavement and the events surrounding that in fact, helped to make up my mind that I wanted to stay in Scotland. That was one thing; another thing very simply was that Jock and I had been talking, we'd been on holiday and we'd been talking and you know it began to become clear that we could in fact, you know launch this operation and make it succeed. ( )

(Later)Resp. 1. We travel frequently to London for example. I wouldn't live and work in London for all the tea in China. I mean, we, honestly, lead a most satisfactory life (here). We have everything we could ask for, except decent weather, right? We've got 4 golf courses. I mean, Freddy ... not only Freddy and I ... the rest of us, the men, any of us .... I can go home, get changed and be out sailing in half an hour. I can be on the golf course in 10 minutes.

M.G.S. Who wants to live in Surrey (laughs).

Resp. 1. Well thats it. And we can still, within reason, park our cars. We enjoy a happy social life. I spend 5 minutes getting here in a morning. I could walk if I wanted to. Many of our friends down there as you know spend an hour and a half each day, and they can't even get room to drink their pint of beer and eat their sandwich at lunch time.

I have included extensive passages from the interview because this case seems to epitomise much of the founding process - the importance of friendship links, of interlocking business relationships, both legal and personal; the influence of non-business life and its events - bereavement, "quality of life"; a feeling of unease about large organisations and a desire to go it alone whenever a suitable opportunity is perceived. The following example, from a

quite different part of Scotland, though curiously in the same field of data processing, will re-inforce these points. The firm is "Cardpunch Ltd."

M.G.S. And what led up to the founding of the business?

Resp. Frustration, I think mainly. In more practical terms, I was for 27 years with (a major Scottish insurance company) in charge of mechanical accounting. About 3 years ago, and contrary to prior understandings, the firm's merger (with a larger U.K. insurance company) began to lead to wholesale transfers to (England). In fact the firm had been misleading us since 1961, though its probably slander to say so. ( )

I was supposed to go down with them (to a good job), but for various reasons, domestic mainly, I decided to stay in Edinburgh, which at 45 years of age is probably a bit screwball.

I decided to buy a sweetie shop out of my handsome golden handshake. But I took cold feet at the last minute - I didn't want to dish out dolly mixtures after a life of phones ringing, hectic office, etc. ( ) But I didn't want to move - kids in school and so on. So I abandoned the shop idea and was persuaded by a friend to take a job at (a tyre factory) as operations manager for their computer. I stuck it 10 months, longer than my 3 successors. I decided I had had enough and set up in business on my own. It started off really through putting an advert in the paper saying "too old at 44" or something and one person answering it asked me to set up a punch bureau on his behalf. (After long frustrating negotiations I decided to go ahead myself). ( )

In actual fact its contrary to my very nature, because I have depended for years on security as a background to everything I do, and there is absolutely no security, its one of these jobs that I never, in a month of Sundays, thought I would have done voluntarily.

There are other cases which could be quoted which paint very similar pictures, but I want to end this section with "Control Engineering Ltd.", the venture of one of the <u>unsuccessful</u> entrepreneurs whom I interviewed. (Perhaps I should qualify the objective to say that he had been redundant at his previous employment as chief instrument

engineer with a large civil engineering company, had founded his own firm and at the time of interview appeared to have had no success with it).

Resp. The Company decided to re-locate itself in London, and they said to me, "Well, Mr. L., would you like to come to London?" and Mr. L. said "You're not on." It dawned on me then that the pattern would be repeated again and again in this area - that the bigger companies from London, from the South, in their better years will set up offices, set up subsidiaries, what have you, in Scotland, and in the lean years they'll take it all back to the area where the directors live. So I thought, well, damn me, I'd better do something to guarantee the location where I want to live myself. I'll do exactly what they're doing, I'll have my works, my directors, where I live. This is the only way one can guarantee location, your own location. ( )

(There were other factors but the main one was location). I went down to Manchester, for instance, at one point of my career. I was living in Largs at the time, working in Hunterston, living in Largs, and I liked it very, very much indeed. And the company I was working with said "O.K. you have to go down to our Manchester office for a bit." So I looked around and there weren't any other good jobs in Largs, so I said, "Alright, I'll go down to Manchester for a bit. I'm not small minded, I'll move, I'm portable, I'm part of the moving industrial population of this part of the 20th century." And I did that. And I didn't like it down there in Manchester. I didn't like the people and I didn't like the countryside and I thought - I'd like to go back home. And I kept this all to myself because I was ashamed of it, I was ashamed to admit that I couldn't settle myself quickly and easily in another part of the world than the one I'd been brought up in. But then I found that all the other people who had come to Manchester on the same basis felt exactly the same way. Not all of them from Scotland - from parts of England, from Yorkshire, from Wales, and Northern Ireland - they all wanted to go back to where they had come from. So I felt a bit better about it then. I believe fairly strongly about this, that to be happy you should try and stay in the area where you were brought up. ( )

I have a vision of being able to walk to work, in other words, of re-integrating at least for myself, the community, your workplace with your house.

I have to say that I did not expect to find such strong expressions

of attachment to the local community, not such evident emphasis on the non-work sphere of the entrepreneurs' lives, except of course in the case of the innovator whose 'hobby' provided the locus of his inventiveness. Such attachment to non-work communities, and to the physical environment which makes those communities possible (which in practice means a non-urban, non-industrialised environment), may represent a "sphere of value" in Barth's terms, a value which can be maintained by strategies such as new venture founding.

c) Antagonism towards large organisations. I now wish to examine what seems to me to be a common theme amongst almost all the entrepreneurs I interviewed, and which underlies the kinds of reason for founding described so far in this chapter. This theme I have identified as antagonism towards large, complex organisations, and which contains the following characteristics (though no single entrepreneur exemplifies all these elements: the antagonism I am suggesting can be represented as an ideal-typical anti-bureaucracy).[9]

i) Complex organisations emphasise, for the majority of their members, means rather than ultimate ends, they are governed by instrumental rationality and contain long means-ends chains. Anti-bureaucracy emphasises ends, and insists on short means-ends chains in which the decision maker can see the consequences of his own actions.

ii) Complex organisations emphasise impersonality of relationships, and enforce compliance through impersonal rules. Anti-bureaucracy emphasises personal commitment to ends.

iii) Complex organisations place responsibility on the individual

within the limits of and in terms of his organisational role. Anti-bureaucracy places responsibility on the individual in terms of all his social roles.

By definition therefore anti-bureaucracy implies small, face-to-face communities with a strong moral order. Practically, in the business environment, organisations based on these principles are customer-oriented, flexible and fast in response to change, and "honest".

I want here to present evidence in support of these statements (in the context of the previous extracts concerning the reasons for founding), and to delay final comment until the last chapter. The extracts are arranged under the following headings

i) The decision-making process: means and ends.

ii) Community spirit.

iii) Quality.

i) <u>The decision-making process: means and ends.</u> The following extracts will I hope give some idea of the attitudes of the entrepreneurs to the decision making process, and their alternative solutions to the problems they identify.

1. "Forth Chemineering Ltd."

Resp. In the old days it was more like a family business. You could bring up an idea at the board meeting, get it through the R. & D. committee, get an immediate decision for expenditure, evaluation. But the Americans, crumbs, used to frustrate me terribly. You would present a report. Then you had to give a 10 year projection of the return to the company of something that was very nebulous. And they tried to quantify in great detail, somebody's idea of putting up a plant or a project or a process. And by the time it had gone through all the blooming committees .... and we were controlled through the European operation which was

located in Basle. Staffed by accountants.

2. "Engineering Prototypes Ltd."

Resp. Its not I think so much the desire to be independent, its the fun that one gets out of seeing the results of one's decisions come back so quickly to you. You make a decision in (large company), it could be 3 months before all the other people make their decisions and agree to your proposals, or whatever it is and you get the chance to do something about it, and perhaps the effect of the thing altogether is even immeasurable at the end of the day, so you just <u>think</u> you've done a good job, but you're not really sure. Whereas here, the pipeline is very short and utterly clear. Some people like this, other people don't. Other people are happy in some big group set up where they don't really want their decisions to be seen, either to themselves, or anybody else. They like the comfort of anonymity if you like. (laughs). Its not a question of power complex, there were never any feelings of that. It wasn't a striving for power, or final holding of responsibility at all. My thrill in running the small business is seeing the effect of one's own decisions coming back so quickly. And having therefore the opportunity to change them, and modify them, and reach the best ultimate.

M.G.S. Could it be that in setting up a satellite structure, you are giving this same <u>thrill</u> if you like to other people?

Resp. This is it.

3. "A.1 Engineering Ltd."

Resp. I wouldn't say that I thought "I must be my own boss", its just that when one is one's own boss, one .... wins or loses, or succeeds or fails, by one's own decisions - you know that if you succeed, its through your own efforts; you know that if you fail its your own fault. There are so much fewer frustrations from having to do something which you think is not right. I suppose thats inevitable when one works in an organisation, and not at the top.

I try to <u>delegate</u> as much authority and responsibility as possible, so that people who are working in the business make the decisions themselves, and will get the same satisfaction from a good decision being right, as I do.

4. "Electro-Chem Ltd."

Resp. It comes back to this - this is where the buck ends. But this is probably one of the best things, yet one of the hardest things.

M.G.S. Did you not have this responsibility in your previous job?

Resp. Well, you had a <u>degree</u> of responsibility, but there was always someone there you could pass it to, or ... you know, accept someone else's decision. You didn't have final responsibility.

M.G.S. Thats important, is it?

Resp. I think it is. In the job satisfaction it is. To know that you can make a decision, and see it through, whereas before, although you made decisions and you had responsibilities, someone could dictate your responsibilities and your decisions to you, in other words it wasn't <u>your</u> ideas you were proliferating, but someone else's.

5. "Highland Machining Ltd."

Resp. You always had to accept other people's rulings. Now alright, as I say, I did eventually build my own 'niche' as it were, but .... no .... in these very large companies, you become then a number, you don't become an individual. ( ) It's completely inhuman. In actual fact they dampen down ideas. They don't want them, because it goes against the .... the system.

You see, what happens in a large organisation is that if you've got a clever young devil downstairs, the departmental head gets a bit worried, because he sees the bloke downstairs getting ready for his shoes. ( ) I mean, I would be quite happy here if someone's already lining up for my shoes in this place. Jolly good luck to him because I can get on with other things. But these people, they don't look at it that way, they look at it, damn it, I'm going to be out on my ear, and in big companies this is exactly what happens.

M.G.S. So you think a big company breeds a certain type of man?

Resp. I do. I don't think a good man. ....

I believe this, that if a man is in a large company, for more than 5 to 6 years, that man's mental processes are retarded. ( )

They become so indoctrinated with the system, they begin to slow down to the speed of the system. And I don't think thats a good thing.

M.G.S. If you're going to grow very much here in the next 5 years, does the same danger ... occur here?

Resp. It could, yes. But I've already taken the steps on this. Here we have 3 individual buildings, 3 separate units ( ). Now each of these has their own departmental head, and eventually, if need be, these will become 3 companies.

6. "Payload Systems Ltd."

Resp. Well, I'm project scientist for these payloads, and rightly or wrongly I've had a lot of frustrated science. Because I've known how it should have been done, and if you like, you've .... we've all got bosses, and they're all receptive. Now it turns out that you say something, and its disregarded, and 6 months later its revived as a new idea. Now thats pretty frustrating, everybody has it, and here we have an example where our ideas .... we can discuss them and put them into immediate operation, and we can see something tangible. This is very healthy. Its a safety valve almost in a way.

7. "Clyde Computer Services Ltd."

Resp. I think you might be interested in our projections for organisation for the future, because this again is in line to a certain extent with the main board's thinking, and our intention in fact is to split the services into subsidiary, autonomous companies and appoint general management who will have profit participation in their own particular companies.

M.G.S. Why are you doing this?

Resp. The reason why we're doing this is to attract the right sort of individual. And to give the right kind of individual the real incentive, you know, to grow his business profitably. ( ) It is one of the main attractions that this kind of smallish, growing company will have versus some of the big giants with their tremendous technical background. ( )

M.G.S. By giving them autonomy and equity?

Resp. Yes.

M.G.S. I wonder which is the more important of these?

Resp. Autonomy, I would think.

I hope that these comments convey adequately the antagonism against "the system", against the (necessary) procedures of the large companies they had all worked in, and that their comments have helped us to understand more clearly what the desire for independence involves. Notice also the references to some form or other of delegation - that having found a truth they wish others to share in it, or perhaps more pragmatically if being independent engenders commitment in themselves, a dose of it won't do their employees any harm! What is perhaps more interesting is the way that ideas about the problems of size are actually (or potentially) translated into ideas about organisational structures (the "satellite" solution). This leads on naturally to the second set of extracts, which are clearly statements about such things as commitment.

ii) Community spirit. A common phrase used in the interviews was "a happy family", and with only one exception, every company reported good labour relations. What came over was an attitude to employees which saw them as whole persons, rather than as impersonal factors of production. In many cases the entrepreneurs were using other people's labour in order to benefit themselves, or put their ideas into practice, but I am sure they saw this as a co-operative relationship rather than an exploitative one. I suppose it could be argued that there is evidence for a kind of latter day "noblesse oblige'. Perhaps the metaphor of feudal responsibility for one's followers is a

relevant one. Certainly one was given the impression that these were happy, sociable firms to work in: I did not interview any employees however. (There were no references to such phenomena as high labour turnover, absenteeism or disputes, with the single exception of a chemical plant which had very bad working conditions related to its particular technology). Implicit in all these statements of course is the notion that such matters would be quite different in a large, 'impersonal' organisation.

1. "Highland Machinery Ltd."

M.G.S. You say everybody uses your Christian name?

Resp. Its very informal. At this stage. It gets a bit more formalised when you get a bit bigger. But ... how would I put it, well ... a shop floor man can because ... he ... say a toolmaker, if he keeps calling me Mr. Smith, now I can get respect that way, but I mean, what good does it do me? I'd far rather he came across and said "John, look, I'm sorry, I've got a problem here, what do you think?" Now he's far more likely to be open with me if he can do that.

But remember, we have an unwritten law - "strangers in the camp" (sic) and they all call me Mr. Smith. But if I'm on my own its Christian names. This way you see, you build up a very much stronger team. Because if a man's standing at your desk saying "Yes Mr. Smith, No Mr. Smith" damn it you don't know what he's thinking and he doesn't know what you're thinking. But if he's quite happy to blow up and you can blow up, then the 2 of you can .... alright, so you blow up, but one of things you do, you don't carry grudges. On either side.

2. "Border Engineering Ltd."

Resp. I'm John to everyone. Mr. McLeod, the manager, he's 'Mr.' to everyone, but every week goes past there's another one will call him 'Hamish'. And he's beginning to accept it now. He's from a different age from me. And I don't care what they call me as long as they work for me. Well no, I'll qualify that, every man works <u>for</u> himself and works <u>with</u> me. ( )

M.G.S. No demarcation problems?

Resp. No, no, no. The best turner in the shop ... if his machine broke down, now, he'd find himself cleaning the toilet. Might find himself washing the walls, sweeping the floor. By the same token, if I've nothing to do, and the toilet's filthy, I'll go and clean it out. There's no room for pride and all that kind of thing.

3. "Jig and Tool Co. Ltd."

Resp. We try to be flexible to suit the men, adjust hours and so on. We try to do things to suit them as well as us. Lets face it they're here to earn a living same as us.

Before there is any major decision made we put it to the boys on the shop floor too.

4. "Highland Mechanical Engineering Ltd."

Resp. We would never lay workers off. Its not their fault that there's no work, it's management's fault. If the men are good enough to stay in the good times, then you should stay with them in the bad times.

5. "Clyde Computer Services Ltd."

Resp. 1. Nothing existed, and you've created it, and furthermore a larger number of people are coming in and getting satisfaction ( )

Resp. 2. We have a very friendly and happy set-up throughout the whole organisation. I really mean that. Its not bullshit, its true. We have a very loyal gang of folk round about us (sic).

iii) Quality. One might expect that new ventures, especially those founded by men anxious to leave inefficient large companies, would stress the excellence of their own products and services, and indeed this is consistently the case; quality is mentioned so frequently, without any sort of prompting, that it must be seen as an important rationale for success. But I want to make it quite clear

that the references to quality go far beyond what simple good business sense would dictate, as the following extracts will, I hope, show. It seems that 2 related strands are present. Firstly, there is what I would call the quality of business relationships, i.e. the need for the entrepreneurs' personal conduct to be governed by ethics of trust, honesty, truth: "my word is my bond". This is often invoked as part of a general attack on the "morals" of large organisations. (I am reminded here of Durkheims discussion of professional groupings which he thought would regulate economic life by moralising it.[10] I shall return to this topic later). Secondly, the quality of product must be such that it completely meets the customer's specification, since it is the physical representation of the relationship which the entrepreneur has with his customer and which is governed by the ethics referred to previously. By implication also, such relationships are not fostered by large organisations, which don't care about their customers, are dishonest and produce shoddy goods. It is quite clear that when organisations behave like this, they are, to the entrepreneurs I interviewed, <u>morally</u> wrong irrespective of any economic considerations.

1. "Electro-Chem. Ltd."

Resp. Well, I feel that the plating trade in Scotland is really in a disasterous state. The type of finishes that are put out are really dreadful. What my idea, of course, is to build a company where you can give an absolute 100 per cent good job to everybody all of the time. ( )

In this industry .... you know, there's absolute apathy, just turning out crude quality work. And the customers themselves are indoctrinated to accept it.

2. "Scottish Textile Engineering Ltd."

Resp. 1. We both get a tremendous satisfaction that we've got a first class machine. Its not ready to go out yet, but its a Rolls Royce machine. And its nice to know you've something which is not shoddy.

Resp. 2. Its all got to be good. Nicely enamelled, blue and white, green and white, chrome plate. The Americans were all for selling 50 and then forgetting them.

Resp. 1. We want to build up the image of 'Scottish Textile Engineering equals good workmanship and fair play.'

You see, I ... for a number of years now have been very depressed by all dealings with big British companies. It is not good. You write a letter, you never get a reply. You want something done, "Yes sir, we'll send somebody round", nothing ever happens. And this goes on month after month. Eventually I got brassed off with all this.

We want our company to be an old-fashioned British Company, where our word is our bond, if we say we'll do something, we'll do it.

3. "Western Circuits Ltd."

Resp. Quality and accuracy are crucial. We want to build up an image of 'people who are honestly trying'.

4. "Cardpunch Ltd."

Resp. There's nothing <u>technically</u> new. I think we're more concerned in wanting to do the job as if it were my own job. Conscience, in other words: we almost adopt the conscience of the user himself. We don't seem to be so hell bent on making money as our competitors. I worry very much if I turn out something which I think is going to be wrong, even although we have done what the customer tells us. ( ) I often phone a customer and say 'Look, are you sure this is what you meant?' Very often its not. We've helped our customers a lot this way.

5. "Highland Mechanical Engineering Ltd."

Resp. Its most important to be honest with customers, give your word and keep it, especially on delivery

dates and quality. You must have a good name.

6. "Installation Engineering Ltd."

Resp. People put a lot of trust in me - theres a personal thing about it. Not only do you let your client down, you let yourself down if you don't deliver.

7. "Border Engineering Ltd."

M.G.S. (Can you tell me about the director who resigned?)

Resp. A London chancer. And thats on record. A London chancer. A fly-by-night, get-rich, man-on-the-shop-floor's-a-dog, liar. His fly-by-night attitude I could live with. His tall stories I could live with. His laziness I could not approve of, and telling lies I could not tolerate. Black is black, white is white, if I start telling all of these people lies, what are they going to do to me. It does'na work. ( )

M.G.S. Any difference between Japanese and British machinery?

Resp. Only that the Japanese is about £250 better - better machine, better service. ( ) I feel a Japanese thinks the way I do. That if you have a customer, you're obligated to keep him happy. (You sell him something, but you also think about the next time he wants to purchase). Now what are you going to take into consideration when you buy your next one? The performance and service on the last one. (A major British manufacturer) have no idea, dead insolent, bloody awful. ( ) What I find is there's too many fly-by-night, get-rich-overnight merchants in the market today. This is not only significant to engineering, its relevant to everything. You don't get rich being a fly-man, you don't get clever being a fly-man, you have to be honest.

Another failing in Scotland I feel is, too many people are prepared to say "Yes, we will do it, we can do it" when they know full well they don't have the machine to do the job.

(I should say in passing that reference to the superior quality of Japanese equipment and especially of their customer relations was a common event. An entrepreneur recalled with awe how an engineer

had called to check one of his Japanese machines simply because he was in the area en route elsewhere in Scotland, and even though there was nothing wrong with the machine. At the time of interview, sadly, one of his British machines had been out of action for several days and he couldn't get an engineer even to come and look at it).

Summary.

I have tried to show, by the extensive use of verbatim transcripts, the complexity of the reasons which lie behind decisions to found new ventures. Firstly, the relatively few instances of innovation were examined, and the process of technology transfer considered: the entrepreneur is an important agent in this process, which essentially involves the carrying of experience and world-views from one sphere of activity to another. Functional specialism derived from the division of labour leads to compartmentalisation of technical world-views - entrepreneurs appear able to transcend such compartmentalisation. Secondly a large number of cases were examined in which the 'reason' for founding appeared in fact to be simply an 'opportunity' or a 'spur', that is perception of market gaps, blocks to career progression and reluctance to leave Scotland. Thirdly it was suggested that latent intentions to seek 'independence' appeared to have been widely (if not quite universally) distributed amongst the sample, and that this intention was related to a basic antagonism towards large organisations. The main features of this antagonism, which I have called anti-bureaucracy, are a desire for small organisations in which means-ends chains are short, a stress on personal affective relationships (rather than impersonal

instrumental ones), and a yearning for a new moral order in business relationships. Certain independent evidence to confirm these ideas is to be found in the study by Boswell (Appendix 2.16)

Section b) The founding process and its problems.

Chapter V gave the statistical outline of the factors which seemed relevant in the founding process, but I want to use this Section to put some flesh on these rather bare bones. Essentially, I wish to show something of the environment in which the founding process took place, and against which the previous examination of the reasons for founding can be set. It might be thought, from the remarks in Chapter IV on the need for structural change in the Scottish economy, and on the efforts of regional planners to achieve this, that the environment would at least be a supportive one. I hope the extracts in this section will destroy that contention and emphasise the difficulties which the entrepreneurs were experiencing at the time of my field work in 1970.

i) The provision of Capital. Conventional wisdom suggests that this is the main problem facing the new company, but in fact a third of the cases examined said it was not a problem. This is partly explained by the fact that new companies, especially part-time ones, often start on a consultancy basis, or with the minimum of equipment (which can be hired rather than bought), and which then 'plough back' profits to produce capitalisation. There were also examples of sleeping partners, 'backers' who provided the necessary finance. These were both private individuals (usually connected personally with the founder), and finance houses. However, there

was a notable reluctance on the part of many founders to seek help from such sources, as they did not wish to surrender any share of control in the company (the 'possessiveness' of ideas referred to in the previous section). In total, over 90 per cent of the capital requirements for these new ventures came in one way or another from the entrepreneurs own sources. The role of the commercial banks and of governmental agencies is minimal, and a feature of many interviews was the alleged unsympathetic response of banks, central, and local government agencies towards the new ventures. Perhaps the word 'bitter' is the correct description of the attitude of entrepreneurs towards this situation. There were exceptions to this general picture, of course, and it is obvious that at least some public bodies were willing and able to help within the limits of their statutory powers.

Having established the company, and begun production, the firms almost always ran into problems of cash-flow. The antagonism towards large companies which was referred to previously may well be influenced by the way in which such companies delay payment of bills.

Let us have a look at these problems in the entrepreneur's own words.

1. "Payload systems Ltd." This company, it may be remembered was founded by astro-physicists and is a science-based venture: its experience is worth recounting in some detail because it shows the difficulties which non-financial founders meet (and the way the financial world treats them). I don't know to what extent it is "typical" because such science-based firms are difficult to find in Scotland and my sample, as I indicated at the beginning of this chapter, contained very few

examples.

After getting together and reaching the decision that their ideas were worth pursuing, the three founders began to think about capital. They saw an article in the 'Scotsman' newspaper about an American-financed venture capital company based in Paris, which had sent a representative to Scotland who rapidly became despondent about the situation he found: the 'Scotsman' article was headed "Where have all the Scottish Companies gone?" The representative had said there 'was very little doing' and gone home. The founders wrote to the company, having suddenly realised that such things as venture capital suppliers existed: previously they had been thinking solely in terms of commercial banks. There was no immediate reply, it being August and Paris was on holiday. Meanwhile they found a London company willing to listen, and ultimately able to provide capital in return for 80 per cent (and after hard bargaining 70 per cent) of the new company's equity. This the founders refused to contemplate.

Resp. 1. Very despondent, we were. Came back, discussed it, and decided to shelve it completely. Then by chance, we heard of I.C.F.C.

Resp. 2. The thing that was attractive about them was that they had an office in Edinburgh. Rather nice office. After 20 minutes we'd lost the chap in technical jargon. He was smoking his Benson & Hedges by the packet load. "Well, it seems you're enthusiastic enough about this, for us to do a sort of moniter. Now just go away and prepare your cash flows, and your budgets, and this, and that, and the other, and bring it back" (laughs)

And you know, ourfaces were down here. Because technically we're very good, but you know - cash flows, this, that and the other.

So they did a rather unusual thing, they ....

Resp. 2. Cut our money down by a third (laughs)

Resp. 1. But apart from that - they did a hand in hand with us: before we did a submission to them for money they worked out the cash flow and so on. So we had several preliminary meetings. They were a bit worried because we had no business pedigree. Sent 'experts' up and after 10 minutes jargon they were away. Finally they said "O.K. You're through the first filter, you're not a crank."

Science-based industry, excellent. They've got a very keen eye, you see, for pay-off. I went down to London, to Bank Country. It was very simple. I opened up the catalogue and said "Its all American, there's no British, that's what the Americans do for that amount of money, we can do it for half that." We chatted all the way out of the office, and into the Underground, very friendly. Chap later came up to see us, here.

And then they hit us, didn't they?

Resp. 2. That was the worst day we ever had.

Resp. 1. It really was O.K. up to then. Technically perfect, cash flows looked alright. And then they said "Look, how much are you going to put up?" We didn't have too much money. And it stopped there.

They said they would put up a recommendation to the Board, but "You've got to <u>suffer</u>." This is the famous word, you hear everybody use it. You've got to give some indication that you are suffering. You've got to have a pained, drawn look. We were part time, you see, so they thought "You're not really suffering, you're not starving, your children aren't out in the streets."

Anyway they got us to suffer, didn't they. We did find some money, by various means. ( )

They got their capital grant, and T.D.C. (the operating arm of I.C.F.C.) took 42½ per cent of the equity, but does not interfere in day-to-day activities.

M.G.S. You mentioned the Board of Trade. Have you good contacts there?

Resp. 1. In Glasgow? They are not too well informed. Everything is referred to London, and that is bad ( ). We tried St. Andrews House and Scottish Development Department, but they simply said they were doing surveys and studies, and could offer nothing tangible.

All the help comes from over the border. ( )

Locally - you can forget about it.

Resp. 2. We couldn't even get the market figures. You'd think the Board of Trade in Glasgow would have them, wouldn't you? But not a bit of it. They hadn't the foggiest idea. Its surprising, but eventually we got them from Southend-on-Sea.

They tried the commercial banks for loans but with no success:

Resp. 1. They've no means of lending money ( ). Commercial lending is different - normally against property, machinery, past performance. No machinery, no property, no past performance - no money.

Resp. 2. Wouldn't even give me a bridging loan. That was my own bank manager. He was pathetic.

Resp. 1. He was terrible. Mine was different - same bank, different branch. He gave me information on I.C.F.C. in fact.

They were "horrified" at this situation because they had believed Eastern Scotland was a "with-it electronics centre", and that support would be forthcoming. They were obviously cynical about Central Government measures.

Resp. 1. It annoys me when .... Willie Ross (Secretary of State) used to stand up and say "We're going to bring industry to the Highlands, this, that, and the other." <u>Theres no money.</u> You get money for putting a bedroom in a croft in Stornoway, but you won't get money for starting anindustry in the cities.

They have had one good relationship however, with the local authority in which their factory is located, and whose officials have been understanding and helpful in tangible ways, i.e. providing premises.

2. "Scottish Textile Engineering Ltd." The lack of support which commercial banks can or will give is underlined in this example.

Resp. 1. We asked for a bridging loan for this year for £7,000, to cover 7 machines being made. The Bank manager was agreeable after guarantees from each director, but Head Office turned it down

(until company is profitable when long term loans would be considered).

We have now gone to another bank and fixed up a personal loan through the manager at local level.

M.G.S. Does this suggest to you that banks, the banking fraternity are not keen on helping adventurous business?

Resp. 1. No. (Sic. I take this to mean 'No, they are not keen...')

Resp. 2. This is not adventurous. Don't use that word.

M.G.S. Sorry. Wrong word.

Resp. 2. How safe do they want it to be? I've got 2 draper's shops, all this property and no bond on it. I've money in a building society, I've got a life policy. The whole thing ... I could ... if I sold up out, threw everything out, could have £50,000 tomorrow. And they've had my business for years, and years, and years and yet you get nothing from them.

Resp. 1. I think this is just a case where the empire is getting too big ( ). It's not just the general economic situation. It was the attitude - the 'brush-off'.

Resp. 2. I found out who turned it down. An assistant inspector - playing safe.

Resp. 1. This is whats happening throughout the country. It's middle management .....

3. "Border Engineering Ltd." The previous example could be repeated several times over, but one further case can make the point.

M.G.S. Can you say something about how you got your capital? Was it all privately raised?

Resp. Yes. Not a penny raised other than privately. (Describes equity structure).

We approached the bank for overdraft facilities. "No". This would be reconsidered after a year's trading after balance sheets were available. But then, when you've got a year's trading behind you, that's when you should least need it. ( )

Off the record, my own personal opinion is, the Bank Manager thought we were daft. In 1969, going

into business and ploughing everything that we had into it. He thought we were crazy. ( )

He visited us 3, 4 weeks ago, and he told us then he never thought we would do what we have done. (£67,000 turnover in first 12 months). He has said that if necessary he wouldn't mind us going a bit into the red for a week or so - not really an overdraft facility.

4. "Electro Chem. Ltd." The founders of this company managed to find a backer able to raise all the capital they needed, as well as having important contacts in the local government field. He has taken 50 per cent equity and doesn't interfere: something of a god-father, in both senses. However, they had initial difficulties and express the basic problems very well.

M.G.S. What is the bank's general attitude to you as a new company?

Resp. Very poor. You get a very frigid .... no, the bank is very friendly as long as you don't want money from them. (laughs). ( ). The problem with it of course is, when you have new ideas, you have got nothing to back them up with. This is the main stumbling block. No matter where you go to - whether it's the Board of Trade, the Bank, Finance Houses, all you're talking about is an idea, so that no-one has an account .... you haven't got 3 years accounts behind you, to say, "but look, we <u>can</u> do this, and we <u>can</u> do that." What you're purely talking about is <u>you have an idea</u>.

5. "Highland Machining Ltd." If a bank manager is <u>persona non grata</u> then an accountant is the <u>bete noire</u> of most of the entrepreneurs I interviewed. The following is a typical example: except that others may perhaps be more strongly worded.

M.G.S. Is the difficulty with capital, a difficulty of simply <u>getting</u> capital, or is it that banks and so on are not understanding of new companies?

Resp. I would say that Scottish Banks have had a pretty

rough deal. They're very frightened. (Refers to a notorious financial scandal of recent months: Cadco deal).

The local bank manager is still responsible to someone in Edinburgh, and the chap in Edinburgh doesn't know the company as individuals, he merely sees figures, and like all accountants .... accountants are what I call "yesterday's men". By yesterday's men I mean they look at what has happened in the past and they try and look in their crystal ball and forecast and they <u>can't</u>, because they're always working 2 days behind. (Engineers, physicists, managers have to look into the future and) play it by hunch. An inherent feeling. ( ) You can't market analyse because it's something that's unknown, so if its the X-factor unknown you've just got to write out the quotation and hope you're right. Unfortunately, accountants just can't do that, and a bank ... a senior bank manager is the same. They are very, very loth to think along these lines.

This man's comments on governmental help are also typical of many cases.

Resp. You see, the investment grant in Scotland, yes, it is a help, but damn it, the way they work this investment grant is ... it isn't a major help because, lets face it, its a year to 18 months before you can get the grant back.

6. "Jig and Tool Co. Ltd." This company was founded on the basis of personal loans made by local banks to each of the 4 founders individually. But this case serves as an example of a commonly expressed feeling that no governmental agency was interested <u>because they were too small</u>. There is a sense in many of the comments that regional incentives are designed to bring large labour-intensive plants into an area for reasons of political kudos rather than a genuine attempt to encourage native enterprise.

Resp. 1. The banks are generally understanding, as far as the original loan is concerned. I went to see an accountant at the start, and he told me to get lost when he found out how much money we had got. ( )

I.G.S. Its interesting that you feel you could get no

help from the Board of Trade. Yet this is supposed to be a development area.

Resp. 1. We're too small.

Resp. 2. They're not interested in us.

Resp. 1. They're interested in bringing the big companies in. Not developing our own industry. (The local town map has all the big firms on it, but none of the small ones). They aren't interested in you if you are under 10,000 sq. ft. (sic)

A common complaint was voiced about the nature of the information available on financial incentives. (The extract on "Payload Systems Ltd." which I have already given showed how difficult it was for non-specialists to find relevant information). The next case is typical, and goes on to exemplify what for some firms was a nightmare - cash flow difficulties. The reference to American companies as speedy payers was echoed everywhere.

7. "Border Engineering Ltd."

M.G.S. It strikes me that one of your problems has been a lack of information about whats going

Resp. Quite so, yes.

M.G.S. Do you think the grants are not widely publicised enough?

Resp. I think that's very possible. In this instance, I had to dig myself to get this investment grant thing.

M.G.S. Is the literature that's put out understandable?

Resp. No. It's definitely not understandable. Especially when it comes to this training grant. You need a lawyer to analyse a lawyers definition of it. I can't understand it. I had a chap here for 3 hours. And he said "I feel that when I go away I may have over-taxed your brain somewhat." I said "You done that 2½ hours ago." (laughs)

M.G.S. Any other help you're getting.

Resp. No. Finance is the biggest problem. You've no financial help at all .... We have to pay for our steel within 4 weeks, but there's a credit squeeze on and our customers take up to 12 weeks to pay us. The larger the company, the worse they are, with the exception of large American companies.

There is no doubt that investment grants and Selective Employment Tax refunds, when paid in lump sums, helped the cash flow situation which was on the verge of being critical for some companies. The change of regulations which gave instead of a lump sum a tax credit for investment expenditure to be set against profits, came into force during my field-work and was greeted with some apprehension: I do not know what the consequences have been. Cash flow problems amongst small firms are of course well known to economists and politicians (and accountants). What is interesting is the way this problem is interpreted by the entrepreneurs as a parasitic relationship of large powerful firms on small, weak ones, by which means interest-free loans are obtained by the large companies.

Marketing. Many entrepreneurs expressed surprise at the relative importance of the marketing function in their business and this was especially so in the case of men with technical backgrounds. It is clear that a wide range of "contacts" in the particular specialist fields of one's customers is invaluable. Little reference was made to 'advertising' except in small-circulation trade journals. Only 2 advertised amongst the general public. Customers were rarely obtained "cold", i.e. by knocking on doors, and when such a method was used, the story was regaled in the way a man might reminisce about hard times in the past. The most usual source of contacts was the entrepreneur's occupational group. Personal and kin relationships

were mostly unimportant, and often deliberately avoided ("My brother-in-law is an accountant but I wouldn't like him to do the books"). In none of the companies studied was there a sibling relationship between founders, and only a single case of father and son, which was in fact one of the 2 failed companies. I was frequently assured that contracts are <u>not</u> sealed on the golf course, but a small minority believed they were. No one actually claimed to have used such a social or sporting relationship to market his product. There was a general resistance to joining what might be called 'business-men's clubs' such as chambers of commerce, and those who had joined usually commented that they were of little use.

1. "Bruce Engineering Ltd." This was a company which failed, and the following extract may well explain why: it is a good example of how not to do a market survey before founding. (It is happily not typical, and yet companies which carried out apparently sophisticated surveys also found themselves hopelessly wrong).

Resp. So we looked around to see ... and we realised then that we had to have a product of our own in a short space of time because doing work for other people can be very dodgy. So we scratched our heads and we thought "what is the growth industry in Scotland?" And we came away with the answer that it is the tourist industry. "Now what is the place of interest that is visited most in Scotland?" Edinburgh castle. "Which is the second?" Stirling Castle. "What do they have in common?" Amazingly enough the thing they have in common is the cannons that are in the castle. So we decided we'd have a look at them, and we manufactured those. A scale reproduction of the cannons.

He approached the Small Industries Council for help in marketing:

Resp. So we asked them if the cannons would sell -

> where to sell them, so on. We got no help, other than that we should go round shops trying to sell them.

They didn't sell, and at the time of interview a large number of them were being stored as they were produced, and the founders were quite convinced that the only problem they faced was lack of capital. The fact that a competitor in Devon can sell similar cannons in their area is taken as proof that they will ultimately succeed because they are nearer the market. I have referred several times in previous sections to the way that world-views not only contain certain perceptions of what the world is like, but also exclude alternative perceptions. It seems clear from several interviews that men with essentially production oriented occupational experiences have difficulty in comprehending any problems other than those of techniques of production, and those of providing capital. The provision of premises, of labour, and the co-ordination of that labour, and the selling of their products are all seen as somehow secondary, something which can be tackled later - as the previous extract shows. There are two ways in which this difficulty can be resolved: either the founding is a joint one, in which one man is essentially production oriented and the other sales or finance oriented, so that the <u>diad</u> has the requisite knowledge; or the entrepreneur has, or is forced, to move out from a compartmentalised world view - an ability which I have already shown is a feature of many of these men.

2. "Laser Instruments Ltd." The founder of this science-based company expressed the ne bulous nature of the marketing process: the range of problems likely to be met in technical matters is known, while marketing is unknown. If I can use an artillary

metaphor; in technical matters it is a question of making adjustments to direction and trajectory, in marketing matters it is a question of not knowing where the firing range is, nor of whether to take a rifle or field gun.

Resp. The greatest need is (laughs) selling. You never make a fortune <u>making</u> things. We should get around ... you know, we send out brochures, but we should pick up our stuff, and go to the places we know, and actually <u>flog it</u>. Marketing has been our biggest .... well, frustration, I suppose .... because its an intangible thing. We think we know .... we send out these brochures, and knowing the stuff we get through the post ourselves, we just wonder if it's been commissioned to the bin, and we wonder if we are presenting the things in the right way to the right people. If we are being too engineer oriented, if we are persuading the research boys. This sort of thing. We could certainly do with some advice on marketing, and there isn't much. ( ). As far as marketing is concerned, this is the great unknown.

I do not wish to give the impression that <u>all</u> the entrepreneurs were in difficulty over marketing their product. Many were not, and indeed could not meet all the demands upon them. Some were very marketing oriented: as one told me "early to bed, early to rise, work like hell and advertise."

<u>Other problems: labour and premises</u>. Provision of labour was apparently not usually a problem, but I suspect that this is largely because the firms were so small. Those which did have difficulty were the companies beginning to expand beyond the original half-dozen or so employees. The non-availability of skilled labour was the most frequent comment, and workers were often brought long distances (from the South West of England for example). These cases also provided examples of friction with local authorities

over the provision of housing for key workers. Training programs were in use in a few companies and whilst grants were only in payment to a small number, most of the firms employing labour, or about to employ labour, knew of them and presumably in time would come within the government sponsored training schemes. There was a strong emphasis on apprenticeship (half the entrepreneurs themselves having served one), and there were several references to a handful of major Scottish companies who had good apprentice-training schemes, and whose men the entrepreneurs were happy to poach. The need for retraining to convert the pool of unemployed into skilled labour was implicit in many of the responses, and several firms reported the use, for example, of redundant miners in skilled and semi-skilled jobs. I came accross only 2 references to government training centres, one of which was favourable since the centre provided a cheap subcontracting service, and the other of which was very unfavourable since the person concerned was regarded as a very bad workman who was dismissed after making several expensive mistakes.

Provision of premises was clearly a problem for a small minority of companies. I have already referred to the allegations that New Town development authorities were interested only in bringing in large companies, and didn't help small ones. This sort of comment was common accross all Scotland, so is not simply a reflection of the attitude of 1 New Town. (I do know that several of these authorities provide 'nest factories' for small companies, which then move to larger premises if they survive: the allegations may therefore be harsh, but nonetheless they appear to have passed into common usage. I do not know of any evaluation of the 'nest' factory schemes, which appears intuitively useful, but which may present

difficulties for exactly those firms it wants to encourage, namely the growing ones: I was told "whats the point of bedding your machinery in concrete if you have to move in a year's time.") The other problem arising from the provision of premises concerned the length of lease: again the comments were adverse in respect of the New Towns, which were alleged to be demanding up to 25 year leases. On the other hand, many of the entrepreneurs were obviously delighted with the help their local authorities had given them in finding premises. The following short extracts will illustrate these points.

1. "Border Engineering Ltd."

Resp. We did consider setting up in (Local Authority area), until we found out the cost of these cheap factories.

M.G.S. Are these factories too expensive?

Resp. Oh, contrary to what's in the press, they're at least 20 per cent dearer than they are here. Plus the fact that they bind you to a 25 year lease, which is contrary to the last White Paper on the subject.

M.G.S. What about the labour pool here?

Resp. This part of the country, I would stick my neck out and say there are some of the finest turners in Scotland in this area. And I'll stick my neck out again and say that they're ("T.S. Ltd.") time served. Now it suited us very much to go into business at that time, because (T.S. Ltd.) had something of a set-back, and although they didn't pay anyone off they made it common knowledge that they'd be delighted if some of their excess labour were to leave. ( )
I think its a factor in the back of everybody's mind that starts up in this area, if they'll admit it. That they can get good, skilled labour from (T.S. Ltd.).

2. "Fire Sprinklers Ltd."

Resp. (New Town) - they couldn't care less. "The premises are there, several people want them, take them or leave them." They don't take account of the problems of new companies. They won't give you a small factory at a cheaper rate, knowing as you grow you'll need a larger one, which is what a new town is supposed to need - development.

3. "Electro-Chem. Ltd."

Resp. I sort of went off local authorities a bit in its early stages, when we were thinking of going to (a large Burgh). They were not really interested in us going there. The Town Clerk said we were only out to make money, not <u>really</u> interested in employing local labour, and that we would go somewhere else for 2 pence a sq. ft. less.
So we didn't go (there).

4. "Western Circuits Ltd."

Resp. Local government is sympathetic but unable to help. Individuals are interested, yet the bureaucratic process seemed to inhibit them. And they were ill-informed. (New Town) couldn't care less because we've only 15 employees. I'm a bit disgruntled over the New Towns. They seem to prefer a big firm with 1000 new jobs, rather than 20 firms, each with 50 workers, growing as an integral part of the community. They are after a quick pay-off. Its political. It would be more "human" to grow integrated. The other situation leads to problems and bad labour relations. It takes a 10 year cycle to change a town, not 10 months.

5. "Clyde Computer Services Ltd."

Resp. 1. Whenever we've been to the Board of Trade, they've been very helpful, giving advice as to whats available. The local Ministry of Labour manager is a member of the local community - here for 8 or 10 years and one of the boys. The local authority are again helpful and well known.

Resp. 2. I was born (here), lived all my life (here) apart from a spell in the Army. I've grown up with the officials in the Burgh. ( )

We're not sharp practicers, we're open and we have good relationships. ( )

Resp. 1. In the case of skilled ( ) men, we were extremely fortunate. (Large car manufacturers) began to run down their systems and programming staff just at the time of my build-up. I didn't know of this in advance. By good fortune they lived (nearby), but (the car firm) would have employed them elsewhere, and they didn't want to move away.

6. "Highland Machining Ltd."

Resp. Problems? .... Firstly, overoptimistic local authorities. They stated that male labour was available in greater quantities than it actually was.

M.G.S. I take it this is skilled labour?

Resp. No. Any type of male labour. I think they overemphasised that labour was available. I think they exagerated quite a bit really. Which they shouldn't have done, they should have had their facts and figures before any industrialist came near them.

7. "Newtown Pressings Ltd."

Resp. I don't find any hindrances apart from (mass of documentation for government assistance). No, no hindrances at all. I think the most useful thing to me has been the Scottish Council for Small Industries. That seems to me to be a simple, straightforward thing. ( )

M.G.S. I was going to ask about getting labour.

Resp. You can get labourers. Oh, yes, but you can't get skilled men. Its very, very difficult. We've got 1 man from Southampton (3 from a distance in Scotland). ( )

I put an advert in, and put at the bottom "over 40's welcome", and the poor devils, some of them were really past it. But these 2 chaps, one hadn't worked for 15 months, the other for 9 months, <u>couldn't</u> get a job, and I couldn't have 2 nicer men. God, they come here at 8, they leave at half past 4, they're cheerful, they work well during the day. ( )

Labour will always be a problem. I'm trying to get enough work on the books to justify the employment of unskilled-in-training, and apprentices.

I would like to finish this section on the problems which the entrepreneurs face, not by further verbatim extracts, but by presenting unaltered a section of my notes made during interview (notes made mainly to assist me to frame appropriate questions). I think the firm in question probably experienced above average difficulties, but the example does give some idea of the range of problems which this engineer with little commercial experience had to face <u>at the same time</u> as trying to solve technical problems on his product.

> Never had overdraft, capital not terribly important. Banks not helpful, "laughed at me". Plough back income. No help from government. Fighting for building grant - application in 18 months. No investment grants (get cheap second hand machinery from firms which have had grant and gone bust). Regulations on government help complex. Small companies haven't time to pursue application forms etc. Local authority worked a fast one over interest on building loan. Haven't done anything about housing key-worker, foreman: travels 2 hours each day. Problems with telephones - without March to July.

I have attempted in this chapter firstly to shed some light on what led these 60 men to found new ventures, as far as possible in their own words. I have suggested, <u>inter alia</u>, that their reasons are concerned with ideas about "getting on", with antagonisms towards large bureaucracies, with notions of 'quality'. All these will be considered in the next chapter, in the light of course of Chapter 1. Finally, to fill out the picture presented in Chapter V, I have

illustrated the problems associated with the founding process (which stand in stark contrast to the optimism conveyed in the descriptions of Regional policy set out in Chapter IV). Given the harsh environment, we have now to explain why entrepreneurship persists.

References

1. See W. Outhwaite. Understanding Social Life: the method called Verstehen. London. Geo. Allen & Unwin. 1975. See especially Introduction, Chapter 2 "Understanding, Interpretation and Hermeneutics", and Conclusion. The following extracts set out a position with which I am in agreement.

"(There) are those who claim that the social sciences differ from the natural sciences either in the character of their subject matter or in their methods or both. The sociologist's or historian's understanding of the people he studied was variously conceived as following unproblematically from what they had in common as human beings, or as involving some imaginative act such as the 'reliving' of their experiences; it functioned as either an alternative or, in a less extreme formulation, a necessary preliminary or complement to the identification of causal regularities in their behaviour. This tradition is associated with the names of Dilthey, Rickert, Simmel and Max Weber in Germany; there are certain parallels in the work of Croce and Gentile in Italy and Collingwood in England."

"Few people would deny, though some would consider it uninteresting, that the starting-point of social inquiry is some sort of inter-subjective understanding. This is not merely to affirm that ordinary language is the ultimate meta-language of any science (a claim that might be questioned in the case of some of the more highly mathematised natural sciences); it is rather that we begin in the Lebenswelt, talking 'everyday language' and using 'everyday accounting procedures'. This initial situation, I would argue, has a different significance for the social than for the natural sciences; the former take their concepts from everyday life from the language which is common to them and their objects of investigation, and their explanatory principles remain extremely close to those of everyday life. Where social scientists have strayed too far from 'common-sense' contracts, the result has been not greater sophistication, but trivialisation."

2. D. Zimmerman and M. Pollner. "The Everyday world as a phenomenon". in Douglas, J. (ed.) Understanding Everyday Life. London.

3. D. Silverman. "Interview-Talk: Bringing off a Research Instrument". Sociology. Vol. 7. No. 1 January 1973. pp. 31-48.

4. My account may therefore be open to the charge that it is non-sociological. Lay interpretations depict motives as private and internal to the individual (e.g. corresponding to concrete psychological processes) whereas a sociological view locates motives within the category of rules enabling behaviour to be socially intelligible. See especially P. McHugh, S. Raffel, D.C. Foss, A.F. Blum. On the beginnings of Social Enquiry. London.

Routledge. 1974. Chapter 2. "Motive". At worst, my account can serve as a topic for further examination of entrepreneurial motives (cf Cicourel's approach of indefinite triangulation. A.V. Cicourel. Cognitive Sociology.

5. For a comparative use of interview material see H. Popitz, H.P. Bahrdt, E.A. Jueres and A. Kesting. The workers image of society. reprinted in Burns. (ed) Industrial Man Penguin 1969. and Huw Beynon. Working For Ford. Penguin. 1973.

6. The following conventions are used in the transcripts -

(-) portion edited out.

... pause in conversation, or delimiters such as um, er, ah, etc.

( ) my paraphrase or replacement of a section, e.g. to replace real names with ficticious ones.

Resp. / Resp. 2, etc.) Verbatim transcript of respondent, second respondent, and so on.

7. See T. Burns (Ed). Industrial Man. Penguin, 1969. Introduction. p.8. "Human aspirations are now expressed in terms of employment in the positions contained within the occupational system required by industry." It is to this cultural imprint that I am referring, rather than to some notion of a psychological hierarchy of needs (A.H. Maslow, 'A theory of human motivation' Psychological Review Vol. 50. 1943. pp. 370-96).

8. I am not suggesting that there is evidence for some variant of Scottish Nationalism: it is threat of removal from congenial surroundings rather than an emotional attachment to the political entity 'Scotland' which seems to be the motivation, and I was told, for instance, that St. Ives in Cornwall contains several small electronics firms especially created to give their founders the kind of environment they wanted. (This may be a myth, but that doesn't matter since the entrepreneur who told me of it believed it to be true and used it for self-justification).

9. These characteristics are what I take to be the features described to me by the entrepreneurs. They are categorised by me in a way which will facilitate discussion in the final chapter and this categorisation inevitably reflects my knowledge of the work of previous writers on the sociology of organisations.

10. See R. Aron. Main Currents in Sociological Thought. Penguin. 1967. Vol. 2. p.89.

CHAPTER VII

Towards a theory of Entrepreneurship

It is my aim in this final chapter to consider the findings of the research reported in the previous 2 chapters in the context of the earlier writings on the entrepreneur which were described in the opening section, and which were summarised in terms of the following key themes

a) We are concerned with social change and the process of innovation. It is agents, not agencies which are the bearers of the mechanisms of social change.

b) We are dealing with creativo rather than adaptive response (as epitomised by Weber's distinction between charisms and bureaucracy).

c) The perceived social context within which such agents operate is crucially important. Bureaucratic contexts appear to be particularly inimical to creative, autonomous activity.

It was pointed out that any single study could not hope to be more than indicative of the features of entrepreneurship present within the narrow scope of such a study, and that for the purposes of this research the area of enquiry would be restricted to the economic sphere, specifically to the founding of new business enterprises in Scotland in 1969.

The findings of the research program can be stated in terms of economic considerations, and in terms of sociological considerations. Whilst the emphasis in this chapter must be on the latter, it will assist our understanding of the social context if we briefly refer

to the former.

1. Research findings - economic aspects.

i) There was little evidence of direct innovation, e.g. of the kind described in American studies of science-based technology transfer. Several companies began life in terms of a "bread and butter" product, and then moved into innovation (in product or in methods of production) at a late stage, i.e. innovation was stimulated by the experience of founding.

ii) There were few failures (2 out of 37 of the companies in which interviews were carried out), and several businesses were successful and expanding rapidly.

iii) There was surprisingly little contact between central and local government agencies and the new ventures. In the context of allegedly massive regional financial incentives to business, the entrepreneurs I studied received very little help either in terms of money or advice. There was a general contention that government did not understand the problems associated with founding.

iv) This lack of understanding also applies to the banking institutions. Commercial banks were particularly singled out for criticism.

v) As a consequence of the above, most foundings were financed from the personal resources of the entrepreneurs. Profits were 'ploughed-back' in the traditional manner to give capital formation.

(It will be recalled that Chapter IV stressed the imbalance which exists in the Scottish industrial structure, an imbalance which could be corrected, at least in part, by the creation of new, indigenous

enterprises, to which end governmental policy was aimed. The above findings indicate the failure of the Scottish governmental and financial institutions to carry through the necessary program of assistance to new ventures, at least in 1969 and 1970.)

2. Research findings - sociological aspects.

i) Whilst little evidence of technology-transfer and innovation was obtained, there was confirmation of the importance in the transfer process of agents.

ii) If the mechanism of technology transfer was agents, the process of transfer appears to involve an ability to carry the world-view appropriate to one technical/occupational sphere into a different sphere, i.e. to transcend compartmentalisation which the functional specificity arising from the division of labour demands.

iii) The social milieu is crucial for the founding process. Most entrepreneurs remained broadly within the industry in which their past occupational experiences lay, and within which (often 'closed world') their contacts were. This milieu was the provider of capital, customers and information about what was regarded as a problem, e.g. market gaps.

iv) In social class terms, the entrepreneurs tended to be drawn either from the Upper Middle or Skilled Working classes. There were few entrepreneurs with administrative, white collar Middle class backgrounds, and those which I did find were in joint partnerships with technical men usually from skilled working class backgrounds. No entrepreneurs were found who came directly from the 'old professions'.

v) The entrepreneurs on average were young, but not quite as young as some previous studies of founders in science-based companies. There was also a large range of ages. The majority however were mid-30's to mid-40's.

vi) Strong antagonisms were expressed against large scale organisations. The main features of this 'anti-bureaucracy' were expressed as:

a) a need for personal autonomy in decision making, and for short means-ends chains.

b) a need for personal as opposed to impersonal relationships.

c) a need for a new moral order in business based on ethics of trust and honesty, often expressed in terms of "quality".

The entrepreneurs wanted their companies to be small, face-to-face, moral communities.

vii) The main reasons for founding new ventures were

a) Innovation - the putting of ideas into practice. (There were very few examples of this)

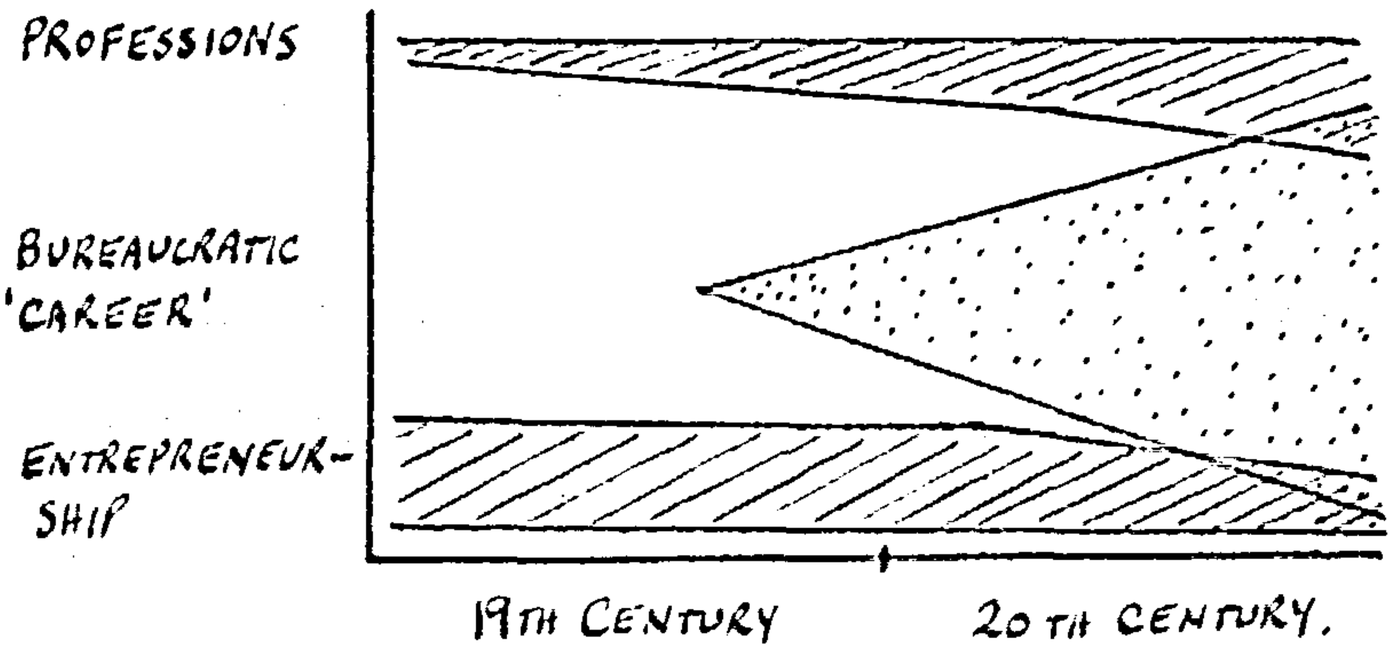
b) Sense of having reached a block in one's career.

c) Refusal to be transferred on promotion out of Scotland.

I believe that these findings have a consistency about them which indicate the presence of common underlying themes, and these are concerned with careerism, or notions about 'getting on', and secondly with bureaucracy and its rival, charisma. Essentially, if we can

explain the 'anti-bureaucracy' referred to above, I believe we will have taken a step towards understanding the nature of entrepreneurship.

1. Entrepreneurship as an aspect of "Getting On". At the risk of appearing to elaborate the obvious, diagram 7.1 reminds us of the way in which the opportunities for 'getting on' have changed in the last 2 centuries. (The diagram is symbolic rather than iconic).



Simply expressed, if in the 19th century one was not endowed with an aristocratic pedigree, the available routes for 'getting on' were the old established professions, and at the other end of the social hierarchy, apprenticeship. A more adventurous and certainly less sure road lay in entrepreneurship, the making of enterprises. The latter involved taking what chances befell, the former were slow, steady step-by-step progressions. Each operated under ethical codes. (Although as Bendix shows[1], entrepreneurial ideologies of concern for one's workers under a 'theory of dependance' soon broke down under advancing industrialisation). The rise of increasingly large organisations in the late 19th century led of course to the provision of an entirely new locus for 'getting on' - the bureaucratic

career. It led also to an expansion of the professions whilst at the same time generating conflict between the bureaucracy and the professions. It may also, according to Galbraith[2] as we have seen, have led to the decline of entrepreneurship, certainly in so far as this is defined as the founding of new business enterprises. All this is devastatingly familiar, but is a necessary preamble to the statement that whilst the bureaucratic career now offers many more ladders to many more people, it also has its costs, and that these costs make other forms of 'getting on', including entrepreneurship, increasingly attractive. The entrepreneurs I interviewed referred to these costs in terms of frustrations, and this was especially true of those who were involved in innovation. A large number of my respondents however were not innovators but men blocked in their careers, experiencing frustration at their inability to get on. I would like to bring two sets of ideas to bear at this point. The first is based on evidence that promotion within a career is a necessary component of an individuals identity not simply in occupational terms, but in terms of his standing in other status hierarchies. Sofer[3] suggests:

> "To be promoted is to receive confirmation that one's function does matter, that one has been building one's specialisation in the right direction, that one's investment in one's particular occupational identity has been worthwhile."

A similar point is made by Barnard[4]:

> "The need is for an endorsement of the individual's past history, as a creditable element in his existing personality. The granting and attainment of improved or different status here is not reward but annointment .... Without such endorsement the effort often appears to the individual to have been in vain. A sense of frustration, sometimes devastating, may follow."

Yet such attainment is perceived to be rare. Sofer quotes his

respondents as

> "in conveying their relations with the company, this group emphasises the extent to which they are confronted with obstacles, blocks, halting points, terminal points, the extent to which they get stuck. These words recur again and again."

And indeed they found echo in the responses of the entrepreneurs I studied. The second idea of relevance here is that of the projet,[6] or life plan, the "intended trend of life" for a man, what he wants to make of it, and of himself in it. Promotion is a means of continued realisation of one's projet. "Pursuit of the project gives meaning, purpose and continuity to what one has experienced in the past, is experiencing in the present and hopes to experience in the future."[7,8] Evidence of such life-plans was available in many of the interviews I carried out, and reference to them appears in some of the transcripts. Clearly a mismatch between the projet and the objective possibility of attaining it within an organisation is a source of personal identity crisis which may be resolved by the socially acceptable (notice the kudos attributable to the word 'director') strategy of founding a new venture.

Entrepreneurship therefore constitutes a permissable alternative path for getting on, and a particularly attractive one in terms of involving acceptable alterations to the life plan. (Compared to, say, emigration, or prolonged retraining). But this explanation does not apply to all the entrepreneurs I studied, and I am forced to the conclusion that my sample may well contain 2 groups

i) remnants of the 'classic' tradition, the innovators (who may also remain <u>within</u> a bureaucratic occupation), and those whose life plan includes taking what chances present themselves (the incredible variety of occupational backgrounds

of my sample is relevant here).

ii) "Service-class" functionaries who have suffered a set back in their project and who take the acceptable strategy of entrepreneurship.

2. Entrepreneurship as an aspect of anti-bureaucracy

> "The most obvious facts are most easily forgotten. Both the existing economic order and too many of the projects advanced for reconstructing it break down through their neglect of the truism that, since even quite common men have souls, no increase in material wealth will compensate them for arrangements which insult their self-respect and impair their freedom. A reasonable estimate of economic organisation must allow for the fact that, unless industry is to be paralysed by recurrent revolts on the part of outraged human nature, it must satisfy criteria which are not purely economic."[9]
>
> "Small is beautiful"[10]

What we have now to explain is "why anti-bureaucratic?' I think there is sufficient literature to document a sense of discontent with modernisation, and particularly with specialised, technological industrialisation, and with large scale bureaucracies. The debate appears to have been carried on at least on 2 levels

i) the demand for a new moral order, based on Gemeinschaft, and expressed through small communities, ecologically self sufficient. This demand is linked to notions of 'alternative technologies' and of 'de-institutionalisation'. It is often concerned with artefacts and involves technicians and architects, for example, as well as sociologists.[11] It's political aspects include the so-called 'youth movement' and claim the necessity of the extension of the decision-making process to include larger numbers of the population, a claim

which subsumes 'worker participation' as well as classic anarchism.

Again this is well known, and it might be possible simply to expand the ideas referred to above and suggest that the creation of new small businesses is yet another aspect of the trend. Certainly there is interesting evidence in the interviews to support some of the ideas: the frequent reference to ideals of gemeinschaft: the plea for a new moral order to regulate business relationships which seemed to replicate Durkheim's assessment of the need for a new 'intermediate' organisation to regulate economic activity[12] - a need partially filled by the 'profession' (and notice my sample contained not one single fugitive from these moral communities). But it fails to tackle the underlying nature of anti-bureaucracy.

ii) The other level of debate is that of consciousness. The interesting question "what have modernization and its institutions done to modern consciousness?" is posed, and I believe, answered by Berger, Kellner and Zijderveld.[13,14] Their arguments are complex and any summary must necessarily do them injustice, but I hope that the general line of their reasoning will be sufficient to support my case.

Zijderveld firstly presents the well known Homo duplex picture, man as a double being, social and individual, conditioned and free - who needs surrounding social structures to be human, to experience meaning and so on. He goes on to suggest that because of pluralism, i.e. the segmentation of its institutional structure, modern society

"has become abstract in the experience and consciousness of man."[15] Berger says "The institutional fabric, whose basic function has always been to provide meaning, and stability for the individual, has become incohesive, fragmented and thus progressively deprived of plausibility.... Inevitably the individual is thrown back upon himself, on his own subjectivity, from which he must dredge up the meaning and stability that he requires to exist.... This is a very unsatisfactory condition.... Put differently, there is a built in identity crisis in the contemporary situation."[16] There is then a sense of dissolving concreteness, especially when man attempts to control the institutions of his society - as Kafka has shown us.[17] Pluralistic structures make for more and more mobility. "Not only are an increasing number of individuals in a modern society uprooted from their original social milieu, but, in addition, no succeeding milieu succeeds in becoming truly 'home' either."[18] The consequences, they argue, are varied

i) there is a crisis of identity with ramification for individual projets.

ii) there is a tendency for man to become 'one-dimensional'[19]

"Industrial Society, losing more and more of its reality and meaning in the experience of man, tends to reduce him to a specialised expert and dehumanized functionary. If we interpret human life as extended between two balancing poles of exteriority and interiority, we may conclude that abstract society reduces human existence to just one pole, that of exteriority."

iii) the individual can only hope to discover or define himself in the interstitial areas left vacant between institutions, e.g.

the so-called private sphere of life.[20]

"It often seems as if only the 'road inward' is left as an escape from the pangs of the situation. Next to revolution (the wish to run amok against traditional institutions) subjectivism (the flight from the frustrations of institutional existence) has put its stamp on the psychological constitution of man."[21] The 'trip' on drugs, and the importation of mystic/gnostic beliefs from the East are cited as examples.

Berger sums up the condition he has identified as follows:

> The final consequence of all this can be put very simply: modern man has suffered from a deepening condition of 'homelessness'. The correlate of the migratory character of his experience of society and self has been what might be called a metaphysical loss of 'home'. It goes without saying that this condition is psychologically hard to bear. It has therefore engendered its own nostalgias - nostalgias, that is, for a condition of 'being at home' in society, with onesself, and ultimately in the universe."[22]

I would suggest that this condition of metaphysical loss of 'home' consequent on the process of modernisation will have other consequences. One is the development of anti-modern movements, of which aspects of the Youth Culture can be cited. Another is internal adaptation of the bureaucratic form in novel ways, and the interesting example here is the Ombudsman concept. But I would also suggest that such a condition of 'homelessness' is one in which there would be charismatic attempts to transcend the prevailing bureaucratic institutional structure. Charisma, as we have seen before, escapes institutional structures, traditional definitions. It is revolutionary, promising new freedoms. It certainly operates at the level of meaning, and it draws on internal powers, but rather than a 'road inward' it produces external <u>social</u> reality. If we now recombine the concepts

of charisma and entrepreneurship, I believe many of the previously described findings fit into place. At one and the same time, the entrepreneurs are giving voice to their 'homelessness' and creating a 'home'. The importance of the social milieu, the reluctance to be parted from their local community, the need for face-to-face relationships, the nostalgia for an old moral code of conduct and the creation of new ones, are all consistent with a discontent with current institutional forms based on pluralist, bureaucratic principles, which leads to a charismatic attempt to reformulate new meanings through the creation of new ventures.

If this analysis is correct, then entrepreneurship assumes again a crucial role in social change since it represents the mechanism whereby the charismatic asserts itself in the face of other institutional forms. It was suggested earlier that the tensions inherent in homo duplex (variously described as 'interiority' versus exteriority, 'I' versus 'me', and so on) have consequences at the level of institution-building: in the case of a bureaucratised society this will take the form of charisma versus bureaucracy. If we accept that contemporary bureaucracy stresses exteriority, to produce 'one-dimensional man' suffering in Berger's terms 'homeless-ness', we should not be surprised that charisma asserts itself in various forms to redress the balance. Evidence of such anti-bureaucracy is clearly discernable in the study of economic entrepreneurship here reported. (Entrepreneurship which is thriving despite a hostile environment). One might assume that in different settings the charisma will assume different forms (for example Chapter 1 referred to religious, ceremonial and moral entrepreneurs). It is clearly the task of further research to examine other settings, other responses.

References

1. R. Bendix. Work and Authority in Industry. See especially pp. 46-48, and 99-116.

2. Galbraith The New Industrial State.

3. C. Sofer. Men in Mid Career. p. 326.

4. C. Barnard. "The functions and pathology of status systems" quoted at ibid.

5. Op.cit. p. 265.

6. ibid. See also T. Burns. "A Meaning for Everyday Life" New Society 25 May 1967.

7. ibid.

8. P. Berger et al. The Homeless Mind p. 70-77.

9. R.H. Tawney. Religion and the rise of Capitalism.

10. E.F. Schumacher. Small is Beautiful. Sphere books Ltd. London. 1974.

11. Ibid. See also D. Dickson. Alternative Technology. Fontana. 1974. I. Illich. Celebration of Awareness. London 1971.

12. J.E.T. Eldridge. Sociology and Industrial Life. Nelson. London. 1971. pp. 87-91.

13. P. Berger. The Homeless Mind op.cit.

14. Anton C. Zijderveld. The Abstract Society. Penguin. London. 1974.

15. Ibid p.49.

16. Berger op.cit. pp. 85-6.

17. F. Kafka. The Castle.

18. Berger op.cit. p. 165.

19. Zijderveld. op.cit. pp. 80-1.
H. Marcuse. One Dimensional Man. London. Routledge 1944.

20. Berger op.cit. p.87.

21. Zijderveld. op.cit. p.57.

22. Berger op.cit. p.77.

Appendices

Appendix 1 - Correspondence, interview schedule, postal questionnaire.

Appendix 2 - Studies of new company founding - annotated bibliography.

Appendix 3 - S.I.C. and Scottish standard regions.

Appendix 4 - The Scottish Economy: indicators.

Appendix 5 - Statistical tables: Scottish firms registered in 1969.

Appendix I

Copies of correspondence, interview schedule, postal questionnaire

UNIVERSITY OF EDINBURGH

DEPARTMENT OF SOCIOLOGY

ADAM FERGUSON BUILDING
GEORGE SQUARE
EDINBURGH EH8 9LL
Telephone: 031-667 1011

Dear

I am writing for your help and advice in connection with some work I am undertaking on the nature and problems of the formation of new enterprises in Scotland. This work is being done in conjunction with (although independent of) the Scottish Council for Development and Industry, which is gathering information on the problems of newly founded firms, with the aim of improving the environment, and particularly the financial environment, for such firms. Supervision of the work is by the head of the Department, Professor Tom Burns.

Specifically, I would like to talk to the founders of recently established enterprises, to try to build up a picture of the present day Scottish entrepreneur and the problems he faces.

I have obtained your name from the public records of the Registrar of Companies, which simply indicate that your company has been recently registered and that you are a Director. So the first thing I ought to find out is whether the company is in fact a newly founded independent enterprise, and not

a) a subsidiary of an existing company, or

b) a company which, whilst only recently registered as of limited liability, has in fact existed for some time, or

c) a company formed to take over a pre-existing enterprise.

Secondly, although a Director, you may not regard yourself as the founder, or co-founder, in which case perhaps you would be good enough to pass on this enquiry to the person(s) in the company who can be so described.

However, on the assumption that you are the founder of a new enterprise, would you be prepared to grant me an informal interview? It is unlikely that I shall require any information of a detailed financial or technical nature, and of course my work is covered by a strict guarantee of confidentiality.

During the next ten days I will contact you by telephone for your comments. Thank you for your co-operation in this matter.

Yours faithfully,

Michael G. Scott.

Appendix 1

FIRST INTERVIEW SCHEDULE

Main areas of enquiry

1. Characteristics of founder
2. The decision to found
3. New idea or new niche
4. The firm's history to date
5. Firm's perceived environment
6. Founder's network
7. Firm's organisation

Name of firm.....

Address of founder.....

Date company began trading.....

What is main activity of the firm?

.....

1. CHARACTERISTICS OF FOUNDER

1. (a) Age date of birth

(b) Place of birth (and country)

(c) Birth order

(d) If founding involved change of address, what was address prior?

2. Parental background

(a) Father's place of birth

(b) Father's occupation (i) when left school

(ii) when founded firm

(c) Any prior history on either F/M side of ownership of business?

(d) Did parents have any influence on decision to found?

3. Education

(a) At what age did full-time education finish?

(b) What was last school/college/university attended?

(c) What formal qualifications obtained?

(d) Anything in educational career which influenced founding decision? (e.g. academic failure/blocked aspirations/ ideas from own research)

(e) Was education "applied" or "theoretical"?

(f) At the time of founding did you have knowledge of formal subjects like economics and accounting? If so, did you find such knowledge helpful or adequate, in starting the firm?

4. Family

(a) Marital status (were you married when you founded firm?)

(b) No. of children if married

(c) If married at time of founding, extent of support/ opposition from wife

5. Previous occupational experience

(a) Last job immediately prior to founding

(b) Earlier occupational history

(include details of any previous foundings, and reasons for failures/cessations)

2. <u>THE DECISION TO FOUND</u>

6. "Why did you decide to found your own company?" i.e. general description of decision.

Prompt for the following:-

7. What was the influence of the prior employment? (e.g. rejected idea, lack of independence, threatened redundancy etc.)

8. Was there observation/knowledge of a person who has himself founded? (e.g. parent, ex-colleague)

9. What risks were perceived?

10. Was there any prior "moonlighting", or part time work on own account?

3. NEW IDEA/NEW NICHE

11. Do you regard any aspect of the firm's operations as novel? (new product, new market, new technique, new organisation). For example, did you think there was an unsatisfied need to be met, or did you believe you could improve on existing products?

12. What led you to your new idea?

Prompt for influence of (a) Education

(b) Prior occupational experience

13. Did you try any other outlet for your ideas, e.g. tell a previous employer, before trying to put them into practice in your own firm?

4. THE FIRM'S HISTORY TO DATE

14. Can you tell me how the firm has progressed and what the main successes and failures have been?

15. If you could go back to the beginning again, what would you do differently?

16. What help have you had from "government" agencies?

17. What hindrance have you had from "government" agencies?

18. What help have you had from "private" agencies?

19. What hindrances have you had from "private" agencies?

20. What would you say are the main difficulties facing the founder of a new firm in Scotland today?

21. Would you say there are any advantages in setting up a new firm in Scotland, or in this part of Scotland?

22. Did you consider setting up anywhere else? If so, what led you to start up here?

23. At the present time, what is your greatest need?

5. FIRM'S PERCEIVED ENVIRONMENT

24. (i) What is the firm's present trading position?

(ii) What future plans do you have?

25. (i) Do you have competitors? Can you tell me something about them?

(a) size

(b) resources

(c) their problems

(d) their future strategies

(ii) What is the future of your market?

(iii) Do you have any contact with your competitors? If so, what type of contact, and how much?

26. (i) Who are your main customers? Can you tell me something about them?

(ii) How did you obtain your first customers?

(iii) What contact (and how much) do you have with them?

6. FOUNDER'S NETWORK

27. What personal contacts do you have in the business community?

(a) any close friends in business/banking/govt? (especially friends who are founders)

(b) are you a member of trade association, Chamber of Commerce, etc.

(c) do you have contact with other businessmen in Church/ Vol. Assoc./sports e.g. golf.

28. (i) Do you have relatives in business/banking/govt?

(ii) Do you have any business contacts which have originated through relatives?

29. How important is it to have friends/relatives in business/ banking/govt?

7. FIRM'S ORGANISATION

30. Can you explain briefly how the firm is organised.

Areas to be considered:-

(i) has organisation been formalised/expressed in a "chart"?

(ii) if so at what stage did this happen? (Where is chart?)

(iii) is authority distribution hierarchical?

(iv) what are task boundaries - how flexible?

(v) communications system.

31. Is present organisation the same as you began with? (What was it at beginning?)

32. Was organisation consciously planned? By whom? At what stage?

33. Where did the ideas for the organisation come from? (e.g. prior experience educational influence, etc.)

34. What have been main changes and reasons for them?

35. Do you plan any changes in the near future? Long term?

36. If you could go back to beginning, what organisational system would you set up?

37. Are you prepared to answer further questions at some future date?

University of Edinburgh,
Department of Sociology,
2 Buccleuch Place,
EDINBURGH 8

Dear

I am writing for your help in connection with some work I am undertaking on the nature and problems of the formation of new enterprises in Scotland. I have obtained your name from the public records of the Registrar of Companies, which indicate that the company was registered during 1969. What I am trying to do is to build up a picture of the kinds of firms established that year, the people who are their founders, the problems they have had to face, and the help they have received.

Because of time limitations, it has been possible to carry out personal interviews with only about a third of the new firms, and I am anxious to gain as much information as possible about all the others, even though it means resorting to this rather impersonal questionnaire method. I should point out that the existing state of information about new firms and their problems is very poor, yet frequent decisions are taken, especially in the fields of government and finance, which materially affect the environment for new firms. With this in mind, I shall publish my work (although in a form which ensures no individual or firm can be recognised, and I can assure you of strict confidentiality.)

I would be grateful, therefore, if you would complete the enclosed form, which covers the absolute minimum of statistical information about the firm. (Obviously I would like to know much more, but long questionnaires get filed in the waste-paper basket!)

However, if there are any matters concerning the founding of the firm which you would like to bring to my notice, please add your comments to the form.

I enclose a stamped addressed envelope. Thank you for your help in this matter.

Yours faithfully,

Michael G. Scott.

Name of Company - - - - - - - - - - - - - - - - -

Address of main premises - - - - - - - - - - - - -

- - - - - - - - - - - - - -

What is the firm's main activity/product? - - - - - - -

- -

When the Co. was registered in 1969, was it then a brand new Co., had it previously been trading, or was it formed to take-over an existing Co?

What date did trading begin? - - - -

Is the company now trading? Yes/No.
(If the co. has never traded, please give reasons overleaf).

Is the Co. independent, or a wholly or partly owned subsidiary?

How many founders did the co. have? - - -

How many employees does the firm now have, including directors? - -

At the time of founding, what was the <u>main</u> source of capital?
(Please tick one)

- Founders' private sources.
- Government, or government Agency.
- Commercial Bank.
- Merchant Bank, or private venture capital / agency.
- Other. (Specify).

How much of a problem was -	Very <u>important</u>	Fairly <u>important</u>	Not a <u>problem.</u>
the provision of capital	-	-	-
the provision of skilled labour	-	-	-
the provision of unskilled labour	-	-	-
marketing.	-	-	-

What has been the general attitude of -	No <u>contact</u>	Help-<u>ful</u>	In-<u>different</u>	Obstr-<u>uctive</u>
Central government				
Local government	-	-	-	-
Banks and finance institutions	-	-	-	-
	-	-	-	-

What Government help have you received?	Not applied for	App'd & rec'd.	App'd & refused	Pending.
Investment grant.	-	-	-	-
Building grant.	-	-	-	-
Training grant.	-	-	-	-
Subsidised premises, or help in finding premises.	-	-	-	-
S.E.T. refunds.	-	-	-	-
Others. (Specify)	-	-	-	-

Does the company have overseas customers? No/Yes.

Does the company have competitors? No. Yes, indirect. Yes, direct.

Does the company plan expansion in the next year? Yes/No.

Appendix 2

Studies of new company founding - an annotated bibliography

Annotated bibliography for the empirical studies of entrepreneurship and new company foundings detailed in Table 2.1

1. Alfred R. Oxenfeldt. New Firms and Free Enterprise
Washington D.C. American Council on Public Affairs. 1943.
General investigation on a national level of social and economic ramifications of company formation. Sample taken from Dun and Bradstreet, Dept. of Commerce. Some empirical studies done on retailing, and specific manufacturing industries, e.g. shoes. Methodology - literature search, data analysis from economic sources. Entrepreneurial definition - Schumpeter.

2. Albert H. Rubenstein. Problems of financing and Managing New Research - based enterprises in New England
Boston. Federal Reserve Bank. 1958
Looked at 75 technical entrepreneurs, bankers, investors, and manufacturers agents, to discover the problems involved. Methodology - literature search and personal interview. Dofinition - Schumpeter.

3. Kurt B. Mayer and Sidney Goldstein. The First Two Years: problems of small firm growth and survival
Washington D.C. Small Business Administration. 1961.
Sought factors affecting survival and failure of firms in first two years of operation. Sample: 81 service and retail firms which were formed or changed hands in Rhode Island between February and July 1958.
Methodology - in depth interviews. Definition - the owner, but not necessarily the company founder.

4. Yusif A. Sayigh. Entrepreneurs of Lebanon

Harvard University Press. Cambridge, Mass. 1962.

Study of 207 business leaders, their backgrounds, and the context in which they operate. Also considers the way entrepreneurship serves the goals of development, i.e. attempts a theory of entrepreneurship appropriate to under-developed countries. Methodology - interviews. Definition - Schumpeter, but includes innovation within extant firms.

5. Lewis E. Daniels. Characteristics of Small Business Founders in Texas and Georgia

Washington D.C. University of Georgia for the small business administration. 1963.

Investigates the backgrounds of the founders of 521 Georgia and 1059 Texas firms of all kinds formed between 1949-58, and 1947-57 respectively. Looks also at their motives and attitudes to business. Methodology - structured interviews. Definition - Schumpeter.

6. Spencer M. Smith, Jnr. and Michael B. Carter. Performance and Potential of Small Business R. & D. Industries in Maryland and Metropolitan Washington D.C.

Washington D.C. Small Business Administration. 1963

Looked at the operations and performance of 73 small technical companies.

Methodology - mail questionnaire and follow up personal interviews.

Definition - owner of the business, not necessarily the founder.

7. Orvis F. Collins, David G. Moore, and Darab B. Unwalla.
The Enterprising Man
Michigan State University. East Lansing, Michigan. 1964.
Study of socio-psychological characteristics of entrepreneurs in sample of 110 small manufacturing firms in Michigan, formed after 1945 and over 5 years old, with more than 20 employees. Methodology - unstructured in-depth interviews: T.A.T. applied. Definition - Schumpeter.

8. Myles S. Delano, Dudley W. Johnson, and Robert T. Woodworth.
Entrepreneurial Report
Washington D.C. Prepared by Graduate School of Business Admin., University of Washington, for U.S. Department of Commerce. 1966.
Examined entrepreneurial function to see if policies could be developed to increase the rate and speed of new business formation. Sample: 402 firms founded between 1960-2, mostly in manufacturing. Methodology - structured interviews. Definition - Say, Knight, Schumpeter.

9. Edward B. Roberts and H.A. Wainer. Technology transfer and entrepreneurial success. Paper presented at 20th National Conference on Admin. of Research Miami Beach, Florida. 27th October, 1966.
Attempt to determine the key factors affecting technical entrepreneurship, and the success or failure of new technical firms, (primarily in Boston area). Looked at 107 university lab., 59 academic dept. spin-offs; 9 spin-offs from a university lab. spin-off; and 15 spin-offs from an Air

Force lab. All companies were not subsidiaries of a previously existing company, and all were formed after 1945. Methodology - interviews and questionnaire; T.A.T. to limited sample. Definition - Schumpeter.

10. Kirk Draheim, Richard P. Howell, and Albert Shapero. The development of a potential defence R. & D. complex: a study of Minneapolis - Saint Paul R. & D. Studies series, Menlo Park, California. Stanford Research Institute 1966. Looked at 142 technical companies formed since 1895, to consider factors relevant to the establishment of a R. & D. complex. Used historical data, and interviews. Definition - Schumpeter.

11. Guveno G. Alpander. Entrepreneurs and Private Enterprise in Turkey
Business Topics (Michigan State University) vol. 15. 1967 pp.58-68
Study of development of private sector in Turkey, and backgrounds of business leaders. Essentially economic, but has section on age, education, etc., and on motivation. Sample 103. Methodology - not stated explicitly, appears to be interviews. (Data based on unpublished Ph.D. thesis, Graduate School of Business Administration, Michigan State University, 1966. "Big business and big business leaders in Turkey).

12. Industrial Research Inc. A Study of science based companies in the Greater Philadelphia Area
Washington D.C. U.S. Department of Commerce, Econ. Devel. Admin.

May, 1967.

Investigation into the motives and problems of science based entrepreneurship in South-Eastern Pennsylvania. Sample of 35 science based companies, using in depth interviews. Definition - Schumpeter.

13. N.R. Smith. <u>The Entrepreneur and his Firm</u>

Unpublished Ph.D. thesis. Graduate Studies School, Michign State University. 1965.

Examination of the relationship between entrepreneurial types and the kind of firm each forms, and factors associated with survival and success. Found there is a strong tendency for the character of the firm to reflect the type of entrepreneur who builds it. Sample: 52 of the firms used in Collins and Moore study. Methodology - unstructured, in depth interviews, supplemented with T.A.T. Definition - Schumpeter.

14. Jeffrey C. Susbauer. <u>The Technical Company Formation Process: a particular aspect of entrepreneurship</u>.

Unpublished Ph.D. thesis. University of Texas at Austin. 1969.

Study of the characteristics of technical company founders in Austin, Texas, and attempt at replication of aspects of previous studies. Sample - 22 technical firms. Methodology - interviews. Incorporates Simon's equilibrium model as part of explanation for leaving previous firm to set up new company. Definition - Schumpeter.

15. Peter Harris and Anthony Somerset. <u>African Businessmen: a</u>

<u>study of entrepreneurship and development in Kenya</u>

London. Routledge and Kegan Paul. 1971

An investigation into the "entrepreneurial talent", what helps or hinders it, where it comes from, how it may stultify itself in its struggle to survive. In particular, what is the entrepreneurial role in a developing economy (Kenya). Definition - Schumpeter - "the doing of new things". Methodology, structured interviews.

16. Jonathan Boswell. <u>The rise and decline of small firms</u>

London. George Allen and Unwin Ltd. 1973.

Investigation into the performance and problems of small manufacturing firms in the Midlands of England. Part of the field work involved enquiry of the chief executives of 64 companies,30 of whom were founders. Methodology - structured interviews.

Appendix 3

Standard Industrial Classification

Scottish Regions

Appendix 3.1: Standard Industrial Classification

Order	Brief description
1	Agriculture, fishing and forestry
2	Mining and quarrying
3	Food, drink and tobacco
4	Coal and petroleum products
5	Chemical and allied manufacture
6	Metal manufacture
7	Mechanical engineering
8	Instrument engineering
9	Electrical engineering
10	Shipbuilding and repairing
11	Vehicle building
12	Miscellaneous metal goods
13	Textiles
14	Leather
15	Clothing and footwear
16	Bricks, pottery, glass and cement
17	Timber, furniture and bedding
18	Paper and printing
19	Other manufactures
20	Construction
21	Gas, electricity and water
22	Transport and communications
23	Distributive trades
24	Business services, finance and banking
25	Professional and scientific services
26	Miscellaneous, sport, hotels, motor repairs etc.
27	Public administration

Appendix 3.2: Regions of Scotland

1	West Central	Glasgow county and city
		Ayr county
		Bute county
		Dumbarton county
		Lanark county
		Renfrew county
2	North Eastern	Aberdeen county and city
		Dundee county and city
		Angus county
		Banff county
		Kincardine county
		Moray county
		Nairn county
		Perth county
3	South Western	Dumfries county
		Kircudbright county
		Wigtown county
4	East Central	Edinburgh city and county
		Clackmannon county
		E. Lothian county
		Fife county
		Kinross county
		Midlothian county
		Stirling county
		W. Lothian county
5	Crofting Counties	Argyll county
		Caithness county
		Inverness county
		Orkney county
		Ross and Cromarty
		Sutherland county
		Zetland

6	Border counties	Berwick county
		Peebles county
		Roxburgh county
		Selkirk county

Appendix 4

The Scottish Economy - basic indicators

Thousands

	1901	1911	1951	1961
Scotland	4,472.1	4,760.9	5,096.4	5,179.3
Inter-censal change per cent		+6.5		+1.6
England and Wales	32,528	36,070	43,758	46,105
Inter-censal change per cent		+10.9		+5.4

Table A4.1 Census populations. 1901-1961

Mid Year Estimates
Thousands

	1965	1966	1967	1968	1969	per cent change 1965-9
Scotland	5,203.9	5,190.8	5,186.6	5,187.5	5,19 .7	-0.2
England and Wales	47,688	47,985	48,301	48,593	48,827	+2.4

Table A4.2 Populations 1965-69

Percentages

	1911	1951	1969
Scotland:			
Under working age	32.3	24.6	26.2
Working age	60.8	62.9	58.9
Over working age	6.9	12.5	14.9
United Kingdom:			
Under working age	30.8	22.6	24.0
Working age	61.9	63.8	60.3
Over working age	7.3	13.6	15.7

Table A4.3 Composition of population 1911-69

Thousands

	1901-11	1921-31	1931-51	1951-61
Births	1,306	1,005	1,849	959
Deaths	763	652	1,347	619
Natural Increase	543	352	502	339

Table A4.4 Births and Deaths 1901-1961

Year	Gross Domestic Product per Head	As per cent of U.K.	G.D.P. per Head of Total Working Population in Employment	As per cent of U.K.
	(1)	(2)	(3)	(4)
1951	243	92	542	96
1963	439	87	996	93
1967	558	89	1,271	94
1969	640	90	1,469	95

Table A4.5 Gross Domestic Product per head in Scotland, Selected Years 1951-69 (£ current prices).

Sector	Contribution to G.D.P. in Scotland	Share of Total G.D.P. in Scotland	Percentage Distribution of U.K. G.D.P.
	£m	per cent	per cent
Agriculture, Forestry and Fishing	113	5.8	4.0
Mining and Quarrying	62	3.2	3.0
Manufacturing	708	36.1	36.1
Construction	125	6.4	6.0
Gas, Electricity and Water	49	2.5	2.7
Transport and Communications	181	9.2	8.6
Distribution	219	11.2	12.1
Insurance, Banking and Finance	44	2.2	2.9
Public Admin. and Defence	122	6.2	5.7
Other Services	340	17.2	18.9
G.D.P.	1,964	100.0	100.0
As per cent of U.K.	8.7	-	-

Table A4.6 Composition of G.D.P. in Scotland and U.K. 1960

	Scotland	Great Britain	Difference, Scotland from Great Britain
1951	54.9	54.6	+0.3
1953	55.3	54.8	+0.5
1958	55.5	56.5	-1.0
	...	...	...
1961	56.6	57.0	-0.4
	...	...	...
1967	56.7	56.8	-0.1
1968	56.4	46.4	-

... denotes a break in method of statistical compilation.

Table A4.7 Activity rates, Scotland and Great Britain, selected years 1951-68

Income Category	England	Wales	Scotland	N.Ireland	U.K.
Profits and Professional Earnings	34.5	31.8	33.9	33.1	34.3
Salaries	133.6	73.0	81.7	73.4	124.1
Wages	214.4	172.1	195.7	133.0	208.3
Net Earned Income	435.6	319.1	357.0	275.0	418.1
Rent and Other Income from Land	3.2	2.4	0.8	2.6	2.9
Interest, Dividends and Other Investment Income	26.7	15.6	26.0	12.0	25.7
Net Investment Income	29.9	18.0	26.8	14.6	28.6
Total Net Income	465.5	337.1	383.8	289.6	446.7

Table A4.8 Structure of Income per head of total population in the separate countries of the U.K. 1967/8 (£)

Year	Scotland	U.K.
1950	3.0	1.5
1960	3.6	1.7
1965	3.0	1.5
1968	3.8	2.5
1969	3.8	2.3

Table A4.9 Average number of unemployed as percentage of those in Civil work, Scotland and the U.K. selected years 1950-69.

	1963			1968		
	Male (000)	Female (000)	Male and Female as per cent of Total Employees (per cent)	Male (000)	Female (000)	Male and Female as per cent of Total Employees (per cent)
Agriculture, Forestry and Fishing	82	13	4.4	59	9	3.2
Mining and Quarrying	72	2	3.4	48	2	2.3
Manufacturing	498	236	33.7	507	242	34.8
Construction	180	9	8.7	189	10	9.2
Services	555	527	49.8	529	558	50.5
Total Employees	1,387	787	100.0	1,332	821	100.0

Table A4.10 Changes in Employment by Main Sectors in Scotland, 1963-8.

Category	1964	1966	1968
Output (£m)	165	247	368
Output per worker (£)	3,200	4,000	5,000
Exports (£m)	75	118	154
Investment (£m)	108	162	232
Employment (000)	52	61	73

Table A4.11 America's share of Manufacturing in Scotland 1964-8

Appendix 5

Statistical tables: Scottish firms registered in 1969

Contents

	Standard Industrial Classification	All companies		Entrepreneurs identified	
		N	%	N	%
Order 1	Agriculture, fishing and forestry	22	2.4		
" 2	Mining and quarrying	7	0.7		
" 3	Food, drink and tobacco	18	1.9		
" 5	Chemical and allied manufacture	4	0.4	2	3.3
" 6	Metal manufacture	4	0.4		
" 7	Mechanical engineering	51	5.5	37	61.7
" 8	Instrument engineering	8	0.9	6	10.0
" 9	Electrical engineering	16	1.7	7	11.7
" 10	Shipbuilding and repairing	8	0.9		
" 11	Vehicle building	3	0.3		
" 12	Miscellaneous metal goods	16	1.7		
" 13	Textiles	16	1.7		
" 15	Clothing and footwear	14	1.5		
" 16	Bricks, pottery, glass and cement	7	0.7		
" 17	Timber, furniture and bedding	10	1.1		
" 18	Paper and printing	19	2.0		
" 19	Other manufactures	8	0.9		
" 20	Construction	123	13.2		
" 22	Transport and communications	43	4.6	1	1.7
" 23	Distributive trades	173	18.5		
" 24	Business services, finance and banking	176	18.8	2	3.3
" 25	Professional and scientific services	22	2.4	4	6.7
" 26	Miscellaneous, sport, hotels, motor repairs etc.	161	17.2		
Unclassified		6	0.6		
		N= 935	100	N= 60	100

Table A5.1 Distribution by Standard Industrial Classification

	N	%
New independent company	56	44.8
Subsidiary of existing company	40	32.0
Take over of existing company	12	9.6
Existing company, new registered as Ltd.	10	8.0
Convenience company, others	7	5.6
	N=125	100

Table A5.2 Status of company at registration

	N	%
1965 or earlier	1	1.7
1967	1	1.7
1968	3	5.0
1969	42	70.0
1970	11	18.3
1971	2	3.3
	N = 60	100

Table A5.3 Date trading commenced

Number of Employees	N	%
1 to 10	29	51.8
11 to 20	14	25.0
20 and over	13	23.2
	N = 56	100

Mean number of employees = 32.3

Table A5.4 Size of firm in number of employees

	Founders		Directors	
	N	%	N	%
1	11	19.3	3	2.0
2	28	49.1	67	44.4
3	11	19.3	38	25.2
4	4	7.0	23	15.2
5	2	3.5	9	6.0
6	0	-	4	2.6
7	0	-	5	3.3
8	1	1.8	1	0.7
9	0	-	1	0.7
	N = 57	100	N =151	100

Table A5.5 Number of founders and directors

	N	%
None	4	6.6
Indirect competition	9	14.8
Direct competition	48	78.7
	N = 61	100

Table A5.6 Extent and type of competition for main product/service

	N	%
None	38	63.3
Some	22	36.7
	N = 60	100

Table A5.7 Overseas customers

	Central Government		Local Government	
	N	%	N	%
Some contact	28	50.0	32	55.2
No contact	28	50.0	26	44.8
	N =56	100	N= 58	100

Table A5.8 Contact with Central and Local government

	Central Government		Local Government	
	N	%	N	%
Helpful	19	76.0	18	58.0
Indifferent	5	20.0	11	35.5
Obstructive	1	4.0	2	6.5
	N= 25	100	N= 31	100

Table A5.9 Attitude of Central and Local government

	N	%
Yes	54	88.5
No	7	11.5
	N= 61	100

Table A5.10 Growth expected in next year

BIBLIOGRAPHY

ACTON SOCIETY TRUST
Management Succession.
Acton Society, London. 1956.

AITKEN, H.G. (Ed)
Explorations in Enterprise.
Harvard Univ. Press. Cambridge Mass. 1965

AITKEN, H.G.
"The Future of entrepreneurial research"
Explor. in Entrep. Hist. 2nd Series. VI. (1963)

ALCHIAN, A.A.
"Uncertainty, Evolution and Economic Theory"
Jour. Polit. Econ. v.58. 1950

ALDCROFT, D.H.
The Entrepreneur & the British Economy, 1870-1914.
Econ. Hist. Rev. V.17. No. 1. Aug. 1964.

ALPANDER, G.G.
Entrepreneurs and Private Enterprise in Turkey.
Business Topics (Michigan State University) V.15. (1967)

ARON, R.
Main Currents in Sociological Thought.
Vol. 2. Penguin. 1967.

BARTH, F.
The Role of the Entrepreneur in Social Change in northern Norway.
Scandinavian Univ. Books. Oslo. 1963.

BATES, J.
The financing of Innovation
The Bankers Magazine. V.194 1962.

BELSHAW, C.S.
"The Cultural Milieu of the Entrepreneur".
Explor. in Entrep. History. V.7. (1955)

BENDIX, R.
Max Weber: An Intellectual Portrait.
N.Y. Doubleday. 1962.

BENDIX, R.
Work and Authority in Industry.
N.Y. Harper & Row. 1963.

BERGER, P.L., BERGER, B. and KELLNER, H.
The Homeless Mind
Penguin. 1974.

BERLE, A.A. & MEANS, G.C.
The Modern Corporation and Private Property.
N.Y. Macmillan. 1932.

BEYNON, H.
Working for Ford.
Penguin. 1973.

BIRCH, S. & MACMILLAN, B.
Managers on the Move.
B.I.M. Report No. 7. Brit. Inst. Management London 1972.

BOLTON REPORT.
Report of the Committee of Enquiry on Small Firms.
Cmd 4811 H.M.S.O. London 1971.

BOSWELL, J.
The Rise and Decline of Small Firms
Geo. Allen & Unwin. 1973.

BROWN, A.J.
The Framework of Regional Economics in the U.K.
Cambridge, U.P. 1972.

BURNS, T. (Ed).
Industrial Man.
Penguin. 1969.

BURNS, T.
"Models, Images and Myths" in W.H. GRUBER and D.G. MARQUIS
Factors in the Transfer of Technology.

BURNS, T.
"An Enterprising Future?"
B.P. Shield Sept. 1968

BURNS, T.
"Sociology of Industry"
in WELFORD (Ed) Society, problems and methods of study.

BURNS, T.
"A meaning for everyday life"
New Society 25 May 1967.

BOSWELL, R.J. and LEWIS, E.W.
"The Geographical Distribution of Industrial Research activity in the U.K."
Regional Studies. No. 4. 1970.

CAMERON, G.C. & REID, G.L.
Scottish Economic Planning and the Attraction of Industry.
Oliver and Boyd. 1966.

CENTRAL STATISTICAL OFFICE.
Abstract of Regional Statistics
No. 6. H.M.S.O. London 1970.

CHECKLAND, S.G.
The Rise of Industrial Society in England 1815-85.
Longmans. 1964.

CHINOY, E.
Automobile Workers and the American Dream
N.Y. Doubleday. 1955.

CICOUREL, A.V.,
Cognitive Sociology.

C. CLARK
"Industrial Location and Economic Potential"
Lloyds Bank Review. No. 82. Oct. 1966.

CLEMENTS, R.V.
Managers; A study of their careers in Industry.
Geo. Allen and Unwin. 1958.

COLE, A.H.
Business Enterprise in its Social Setting
Harvard Univ. Press. Cambridge Mass. 1959

DALGLEISH, P., COLLINS, O.F., MOORE, D.G. and UNWALLA, D.B.
The Enterprising Man.
Michigan State University. 1964.

DALGLEISH, R.
"The Small Scottish Company"
Scottish Economic Review. Spring 1970.

DANIELS, L.E.
Characteristics of small Business Founders in Texas and Georgia.
University of Georgia for the Small Business Administration.
Washington D.C. 1963.

DELANO, M.S., JOHNSON, D.W. and WOODWORTH, R.T.
Entrepreneurial Report.
Graduate School of Business Admin., Univ. of Washington D.C.
for U.S. Dept. Commerce. 1966.

DEPARTMENT OF INDUSTRY.
"Oil Related employment in Scotland"
Scottish Econ. Bull. No. 7. Feb. 1975.

DICKSON, D.
Alternative Technology
Fontana. 1974.

DIGEST OF SCOTTISH STATISTICS.
No. 35. April 1970.
Scottish Statistical Office. H.M.S.O. Edinburgh.

DOUGLAS, J. (Ed).
Understanding Everyday Life.
Routledge. 1971.

DRAHEIM, K., HOWELL, R.P. and SHAPERO, A.
The Development of a potential defence R. & D. Complex; a study of Minneapolis - Saint Paul.
R. & D. Studies series, Menlo Park. California.
Stanford Research Institute. 1966.

EISENSTADT, S.N.
Max Weber on Charisma and Institution Building.
University of Chicago Press. 1968.

ELDRIDGE, J.E.T.
Sociology and Industrial Life.
Nelson. 1971.

FAGAN, R.
"Charismatic Authority and the Leadership of Fidel Castro".
Western Polit. Qtly. V.18 (1965)

FIRTH, R. & YAMEY
Capital, Saving and Credit in Peasant Societies.
Geo. Allen & Unwin. 1964.

FIRTH, R. (Ed).
Themes in Economic Anthropology
A.S.A. Monograph 6. (1967)

FORSETH, D.A.
The Role of Government-sponsored research laboratories in the generation of new enterprises - a comparative analysis.
Unpublished M.Sc. Thesis. 1966. Mass. Inst. Technol.
A.P. Sloan School of Mngmt.

FRASER, L.M.
Economic Thought and Knowledge.
Black. 1937.

FREUND, J.
The Sociology of Max Weber.
Allen Lane. 1968.

FRIEDLAND, W.H.
"For a Sociological concept of charisma"
Social Forces. V.43. (1964-5)

GALBRAITH, J.K.
The New Industrial State.
Penguin. 1967.

GENERAL REGISTER OFFICE, EDINBURGH.
Sample Census of 1966, Scotland.

GENERAL REGISTER OFFICE.
Classification of occupations.
H.M.S.O. London 1960.

GERTH, H. & MILLS, C.W. (Eds).
From Max Weber: Essays in Sociological Theory.
N.Y. Oxford Univ. Press. 1946.

GIESBRECHT, M.G.
"Entrepreneurship vs. Modern Mngmt.
A Co-aim for Business".
Business Topics. V.16. No. 1. 1968.

GOULDNER, A.W.
Patterns of Industrial Bureaucracy.
Routledge. 1955.

GROSSFIELD, K.
Inventions as business.
Economic Journal. V.72 1962.

GRUBER, W.H. & MARQUIS, D.G. (Eds).
Factors in the Transfer of Technology.
1969.

HALL, J. & JONES, D.C.
"Social Grading of occupations".
B.J.S. Vol. 1. 1950.

HALL, R. & HITCH, C.J.
Price Theory and Business Behaviour.
Oxford Studies in Price Mechanism. 1951.

HALLETT, G., RANDALL, P. & WEST, E.G.
Regional Policy for Ever?
Inst. Econ. Affairs. London 1973.

HARVARD UNIVERSITY RESEARCH CENTRE IN ENTREPRENEURIAL HISTORY
"J.A. Shumpeter, Economic Theory and Entrepreneurial History
in Change and the Entrepreneur".
in. Encyclop. of Soc. Sciences (1968) V.5 pp.87-91.

HIRSCHMAN, A.O.
The Strategy of Economic Development.
Yale Univ. Press. New Haven. 1958.

INDUSTRIAL RESEARCH INC.
A Study of Science Based companies in the Greater Philadelphia Area.
Dept. Commerce, Washington D.C. Econ. Devel. Admin. May 1967.

JOHNSTON, T.L., BUXTON, N.K., & D. MAIR.
Structure and Growth of the Scottish Economy.
Collins. 1971.

KAFKA, F. (Trans. W. & E. MUIR)
The Castle.
Penguin. 1957.

Van de KROEF, J.M.
Entrepreneur and Middle Class in Indonesia.
Econ. Devel. and Cult. Change. V.2 (1953-4)

LANGRISH, J., GIBBONS, M., EVANS, W.G., & JEVONS, F.R.
Wealth from knowledge.
Macmillan. 1972.

MARCH, J.G. (Ed)
Handbook of Organisations
Chicago. McNally. 1965.

MARCUSE, H.
One Dimensional Man.
Routledge. 1964.

MARGOLIS, J.
"The Analysis of the Firm: Rationalism, Conventionalism and Behaviourism".
Jour. of Business. V.3 (1958)

MARRIS, P. & SOMERSET, A.
African Businessmen: a study of entrepreneurship and development in Kenya.
Routledge. 1971.

MAYER, K.B. & GOLDSTEIN, S.
The First Two Years: problems of small firm growth and survival.
Small Business Administration.
Washington D.C. 1961.

McCLELLAND, D.C. & WINTER, D.G.
Motivating Economic Achievement.
N.Y. Free Press. 1969.

McHUGH, P., RAFFEL, S., FOSS, D.C. & BLUM, A.F.
On the Beginnings of Social Enquiry.
Routledge. 1974.

MOMMSEN, T.
"Max Weber's political sociology and his philosophy of history".
Int. Soc. Sci. Journal. V.17 (1965)

MARQUIS, D.G.
2nd Report, Research Program on the Management of Science and Technology.
Sloan School of Management Working Paper No. 344-67
Massachusetts Inst. Tech. (1967)

NICHOLS, T.
Ownership, Control and Ideology.
Geo. Allen & Unwin. 1969.

OUTHWAITE, W.
Understanding Social Life.
Geo. Allen and Unwin. 1975.

OXENFELDT.
New Firms and Free Enterprise
American Council on Public Affairs.
Washington D.C. 1943.

POLANYI, K., ARENSBERG, C. & PEARSON, H.
Trade and Market in the Early Empires.
Glencoe Ill. Free Press. 1957.

REPORT OF THE COMMITTEE ON HIGHER EDUCATION (ROBBINS REPORT)
H.M.S.O. 1963.

ROBERTS, E.B.
"Entrepreneurship and Technology"
in W.H. GRUBER and D.G. MARQUIS.
Factors in the Transfer of Technology

RUBENSTEIN, A.H.
Problems of financing and Managing New Research-based enterprises in New England.
Federal Reserve Bank. Boston. 1958.

SAYIGH, Y.A.
Entrepreneurs of Lebanon.
Harvard U.P. Cambridge Mass. 1962.

SCHUMACHER, E.F.
Small is Beautiful
Sphere Books Ltd. 1974.

SCHUMPETER, J.A.
Theory of Economic Development
Harvard Univ. Press. Cambridge Mass. 1934.

SCHUMPETER, J.A.
Capitalism, Socialism and Democracy
N.Y. Harper and Row. 1947.

SCHUMPETER, J.A.
"The Creative Response in Economic History".
Jour. of Econ. Hist. V.7 (1947)

SCOTTISH OFFICE.
The Scottish Economy 1965 to 1970: a Plan for Expansion.
H.M.S.O. Cmnd 2864. Edinburgh 1966.

SILVERMAN, D.
"Interview-Talk: Bringing off a research instrument".
Sociology v 7. No. 1 (Jan. 1973)

SMITH, N.R.
The Entrepreneur and his Firm.
Unpublished Ph.D. thesis. Graduate studies School, Michigan State University. 1965.

SMITH, S.M. (JNR) and CARTER, M.B.
Performance and Potential of Small Business R. & D. Industries in Maryland and Metropolitan Washington D.C.
Small Business Administration, Washington D.C. 1963.

SOFER, C.
Men in Mid-Career.
Cambridge U.P. 1970.

STINCHCOMBE, A.L.
"Social Structure and Organisation"
in J.G. March (ed). Handbook of organisations.

SUSBAUER, J.C.
The technical Company Formation Process: a particular aspect of entrepreneurship.
Unpublished Ph.D. thesis. University of Texas at Austin. 1969.

TAWNEY, R.H.
Religion and the Rise of Capitalism.
Penguin. 1938.

TOOTHILL REPORT.
Report on the Scottish Economy
Scottish Council (Development and Industry) Edinburgh 1961.

WEBER, M.
The Theory of Social and Economic Organisation.
N.Y. Free Press. 1964.

WEBER, M.
The Protestant Ethic and the Spirit of Capitalism.
Allen & Unwin. 1948.

WELFORD, A.T. (Ed).
Society, problems and Methods of Study.
Routledge. 1962.

WOLPE, H.
"A critical analysis of some aspects of charisma".
Soc. Rev. v16 (1968)

WORSLEY, P.
The Trumpet Shall Sound
Paladin. 1970.

ZIJDERVELD, A.C.
The Abstract Society
Penguin. 1974.